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# AIR CONDITIONING AND REFRIGERATION News

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## INSIDE DOPE

by GEORGE F. TAUBENECK

Gag of the Week  
Stories of the Week  
Quit Worrying!  
Salesmen Take the Rap  
13 Musts  
Monsanto Has Fun  
The Birds and the Bees

### Gag of the Week

The *Monterey* (California) *Herald*, in delineating an accident involving a movie starlet, recently reported:

"The area in which Miss S. . . . was injured is spectacularly scenic."

(Thank you, subscriber Knowles Brown.)

### Stories of the Week

Star reporter Jack Sweet of AIR CONDITIONING & REFRIGERATION NEWS covered the disappointing Frozen Foods Show in Chicago last month. Dutifully, he wrote a few stories about this fiasco for the NEWS—including a summary of the ringing speech delivered by W. Paul Jones of Philco (which appeared in the April 5 issue).

What Jack didn't tell in his "cover" of the Jones address was that the Philco vice president emulated the "One Foot in the Door" formula of interlarding his "points" with funny stories.

In a "memo to the Boss," Jack Sweet relayed these laughs from that speech:

A symposium was in progress. The first speaker opened up by saying that he would make his talk resemble a corset. "It will fit my subject closely," he guaranteed.

The next speaker, taking the idea further, said he would make his talk resemble a bathing suit. "It will touch our subject at the most interesting places," he vouchsafed.

The third speaker, being enamoured of the comparison (and not to be outdone) said he would make his talk resemble a kimono: "It would fit all around our subject loosely," he promised.

The fourth speaker was in a spot. All the elements of a wardrobe applicable to the situation seemed to be exhausted. So he said there seemed nothing left for him to do.

"Apparently," he apologized, "I must tell the naked truth."

A young, tall and lanky mountaineer shuffled into a Tennessee cross-roads store. With him was his young wife; and in his arms he gingerly cradled a very young baby, only a few days old.

The storekeeper noticed the arrival of this couple, and came over to greet them.

"Jed and Mrs. Jed, it's nice to see you. Haven't seen you about for some time. That your baby you got there, Jed?"

Jed looked a bit startled at the question, considered it a moment, shifted his tobacco to the other cheek, swallowed and said . . .

"Yes'm, reckon so. Leastways it was caught in my trap."

'Way down in Arkansas an undertaker went down and opened his place of business as usual one morning—and lo! lying on the sidewalk in front of his door was a dead jackass.

Puzzled, he surveyed the scene, looking up and down the street. But no one gave a sign or a look which might give a clue to the prankster.

Finally, he cornered the town loafer (who always knew everything) and asked the latter point blank: "Who done it?"

After some persuasion, that individual told the undertaker that he had seen the town's two policemen

(Concluded on Page 12, Column 1)

## Bendix Shows New Line, Lowers Price; To Purchase Rand Washer Co. Interests

SOUTH BEND, Ind.—Bendix Home Appliances, Inc. has announced a complete new line of three automatic washers, two of which incorporate an automatic soap injector as optional equipment. Bendix also announced price reductions on two other models comparable to the 1947 deluxe and standard models.

The company is introducing the Bendix Gyromatic home washer for use in apartment houses and rented homes. This model is specially balanced so it needn't be fastened down. It is available with or without the automatic injector.

The new line, supplementing two post-war models which are being retained, includes the Gyromatic with automatic injector (the GI), the Gyromatic without injector (the G), the deluxe with automatic injector (the BI), the deluxe without injector (the B), and the standard (the S).

Recommended retail prices of the new line are: standard, \$229.95; deluxe, \$249.95; deluxe with automatic soap injector, \$269.95; Gyromatic, \$299.95; Gyromatic with injector, \$319.95.

All the new models incorporate improved engineering, styling, and washability features. Retained are the tumble-action washing and rins-

### 'Distributors, Dealers Will Set Prices on 1947 Models'

SOUTH BEND, Ind.—Answering queries about company policy concerning the pricing of 1947 Bendix models which are being retained in the line to give the public a selection of seven, Bendix President Judson S. Sayre said that these prices are being controlled exclusively by distributors and dealers.

(In Detroit a Bendix 1947 standard model was being advertised at \$199.50.)

ing principles and the distinctive porthole door with which Bendix has been identified.

The automatic injector adds either soap or synthetic detergent in metered amounts which are predetermined by the operator. The device permits the soaking of clothes and immediate washing without attendance of the operator. It eliminates waiting for the machine to fill with water and places the addition of soap or synthetic detergent on a scientific basis, Bendix claims.

Then Bendix Gyromatic is vibrationless, says the company, since the motion of the spinning mechanism is

(Concluded on Back Page, Column 1)

## Retailers May Ask Mart Date Change

NEW YORK CITY—Home furnishings retailers throughout the country are getting set for a fight to force "Chicago interests" to set home furnishings market dates more acceptable to the trade, according to a story published in the public press here last week.

A director of the National Retail Furniture Association said that organization would take a leading role in the fight to get market dates changed, and declared that manufacturers in areas outside of Chicago would support the fight.

Goal of the retailers, it is said, is simply to have the opening dates moved to a few days beyond the objectionable Jan. 3 and July 5 dates generally used, which are objectionable because of the proximity to New Years' and Independence Day.

While the American Furniture Mart sets the dates, retailers believe that much of the blame belongs on the shoulders of hotel, real estate, and other Chicago interests.

SOUTH BEND, Ind.—Stockholders of Bendix Home Appliances, Inc. have approved the purchase of the H. J. Rand Washing Machine Co. of Cleveland, which will give Bendix control of patent applications on the Rand-type washer, said to be radically different from any washing machine now available.

Approval was voted at the stockholders' recent annual meeting. This meeting also saw all Bendix directors re-elected and a net profit of \$1,658,751.98 for the first quarter of the year reported.

The Rand washer is still in the development stage, according to Bendix officials, who have revealed no inkling of just what the washer is like.

The Rand Co., organized in 1946, has never engaged in manufacturing its washer, owns no plant, and has

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## Oil Burner Group Fights Opposition To Future Sales

CHICAGO—Will the oil supply be great enough in the immediate future to insure supplies for whatever amount of oil burning heating equipment may be sold?

That was the "burning" question at the recent Oil Heat Institute conference here. An oil company executive warned the oil burner producers not to "oversell your market" or it "may have disastrous results for both our industries."

The oil burner manufacturers, on the other hand, declared that efforts to prevent the sale of new oil-burning equipment "border on the illegal," and roundly criticized the petroleum producers for failure to up production during the past winter, and to make better use of transportation facilities.

Dr. Robert E. Wilson, chairman of the board of Standard Oil Co. (Indiana) told the conference that sales of oil burners last year were nearly five times greater than the average for the 10 prewar years.

"The burner industry has succeeded too well," he said. "Demand for fuel oil has reached the point where it is no longer a by-product of gasoline, but a main product."

"Until pipe lines and other facilities

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### Specifications Data On Home Freezers In Next Issue

Specifications of models of home and farm freezers now being manufactured will be published in the next (April 26) issue of Air Conditioning & Refrigeration News.

These specifications will provide a guide as to who is now active in this field, and the exact type of equipment that is being manufactured.

Readers who may wish extra copies of this issue are urged to get their requests in early.

## Ralph Hunt Leaves Universal Cooler, Joins Frank Pierce

DETROIT—Ralph E. Hunt, who for the past 18 months has been works manager for Universal Cooler Division, International Detrola Corp., has been named to the staff of Frank H. Pierce, president of Dearborn Motors Co. here. Before joining Universal Cooler, Hunt had been factory manager, thermostat division, Ranco Inc.

## 60 Firms Set for Coast Conference In San Francisco

SAN FRANCISCO—Some 60 manufacturers of refrigeration and air conditioning equipment and supplies are set for exhibit space at the West Coast Educational Exhibit and Conference to be held at the Palace hotel in San Francisco on April 30, May 1 and 2.

This conference, sponsored jointly by the California Association of Refrigeration Service Engineers Society and the Refrigeration Equipment Manufacturers Association is the first of a series of new type educational conferences to be sponsored by Rema.

Unusual feature of the exhibition is that there is no sale of the exhibit space, nor can the exhibitors offer anything for sale.

Exhibit space is offered without cost to all manufacturers who exhibited at the last All-Industry Refrigeration and Air Conditioning Exposition. Nothing is offered for sale. Accent is placed on the correct use and application of the various types of equipment. Exhibitors are encouraged to use working models, cutaway models, drawings, slide films, etc. to show the right way to use and install equipment.

Exhibits will be open from 10 a.m. to 10 p.m. on Friday, April 30, and from noon to 5 p.m. on Saturday.

(Concluded on Page 29, Column 1)

## American Coils Co. To Reorganize

NEWARK, N. J.—Plans for the reorganization of the American Coils Co. here are to be submitted to the United States District Court for final approval today, April 19, by Andrew B. Crummy, trustee for the corporation.

Election of officers and directors, financing, a new stock issue, and payment of claims over a two-year period are provided in the proposed plan.

Heading up the corporation will be Michael Parcaro, S. R. Hirsch, John J. Brody, and H. A. Thiabault, with Parcaro as president, Brody as secretary-treasurer, and Thiabault as vice president.

New capital of \$20,000 by means of a chattel mortgage would be added to the company, this mortgage being subordinate to existing liens and a mortgage to be given to the trustee for unsecured creditors.

All unsecured claims in the amount

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## Dealers Told To Build Sales Around Family Unit

WHITE PLAINS, N. Y.—Take an inventory of family units in your areas and then concentrate your sales programs on these units, H. L. Andrews, vice president and General Electric Co.'s appliance and merchandise division, advised 300 G-E appliance dealers at a testimonial dinner here.

The dinner was sponsored by the dealers in honor of Earle Poorman, manager of GE Appliances, Inc., New York City distributor. The tribute was in recognition of Poorman's "contribution to a healthier electric appliance industry."

Andrews pointed out that 14,000,000 new family units are now starting to buy the things they want. He said these units have more money available for "discretionary spending" than the total average family income in 1940.

He recommended that the dealers find out how many new family units

(Concluded on Page 29, Column 3)

## Utility Men Hit Failure To Push 'Electrical Living'

Point to Advertising,  
Making of Gas-Fired  
Units by Electric Mfrs.

By John O. Sweet

CHICAGO—Electric utilities are making ready to engage in an all-out battle to get the U. S. "to live electrically"—from electric kitchens and laundries to home heating by the heat pump.

That became evident at the recent Edison Electric Institute's annual sales conference here, where they cheered speakers who proposed campaigns to turn back aggressive competition from other fuel sources.

Addressing the residential section during presentation of the new all-electric kitchen program developed by the committee, T. O. McQuiston, of Duquesne Light Co., said electric utilities "have neglected to provide the type of national leadership that is necessary to convince America that 'we all live better electrically.'"

He indicated that these developments, among others, are the result of this failure and emphasize the "great need for a national program to sell electric kitchens, electric laundries, and all phases of electrical living."

1. Many manufacturers of electrical household appliances are investing huge sums of money in competitive products. 2. Few appliance manufacturers' advertisements featuring electrical products ever mention the word "electric" or attempt to sell its advantages. 3. Four hundred thousand more bottled-gas ranges than electric ranges were sold in 1947, the biggest sales year in the history of the electric range business.

Speaking on the subject, "Is There a Termite in the House," McQuiston analyzed the various types of competition for the refrigerator, range, water heater, and clothes dryer market that make up "our termite problem."

McQuiston first called attention to the American Gas Association's national program which, he cautioned, "cannot be taken lightly." He described the campaign as intelligently conceived, practically executed, aggressive, and well financed.

"It is more than an advertising campaign aimed at the consumer," he pointed out. "It is a promotional program to sell the benefits of gas service to the home appliance industry, to the national magazines, and to all other related industries."

"From information received, the Gas Association will spend \$1,400,000 this year on the 'Gas Has Got It' campaign, not to mention the \$827,000 spent in 1947. And this amount is but a small part of the advertising and editorial copy it influences throughout the country."

"The obvious and basic strength of the . . . program is both positive and negative in character. It is positive in that it is unified in its effort to coordinate all branches of the gas industry. It is negative in that it depends upon the inability of the electrical industry to unite in a co-operative movement to sell the advantages of electrical living as against that of gas."

McQuiston then displayed an AGA advertisement that appeared in national publications. He asked his audience to make a mental note of five features "because you will later see how this advertising extends influence over the entire gas appliance industry."

The features of the advertisement were: it headlined the word "gas"; it featured a national slogan, "Gas Has Got It"; it recommended "CP" gas

(Concluded on Page 2, Column 1)



## Hit Failure To Push 'Electrical Living'--

(Concluded from Page 1, Column 4)  
ranges; it set forth nine benefits of gas service over those offered by competition; and it listed the merchandising features of a gas range as distinguished from the advantages of gas service.

Next, McQuiston showed advertisements published by the Gas Appliance Manufacturers Association and by individual manufacturers of gas appliances to illustrate how the advertisements tie in by selling not only merchandise but the benefits of gas service as against the electrical way of living.

He noted that the GAMA advertisement headlined the word "gas," highlighted "CP" gas ranges, listed the manufacturers that make them, carried the national slogan, and told what the association is spending on the tie-in program. ("The 'CP' program is backed by an \$8,000,000 gas industry-wide program in 1948.")

Turning to the negative side of the AGA promotional program, the speaker asserted that "for the most

part, the electrical competition is a brand competition."

"While a tremendously powerful effort, its utmost potential is weakened because it is only concerned with selling makes of appliances," he asserted. "Its sponsors have neither the time nor the inclination to adequately sell the principle of electrical living."

"To illustrate the point that the electrical industry has failed to stress the advantages of electrical living it is only necessary for any one of us to read the manufacturers' advertisements featuring electrical products today. It is amazing but true that few of them ever mention the word 'electric' not to mention the fact that they don't attempt to sell its many advantages."

### Failure In Advertising

McQuiston then asked the audience to study "just a few of the hundreds of electric appliance advertisements examined by your electric kitchen

and laundry committee." He said these advertisements are not the exceptions but the rule.

The first ad displayed was one published in women's magazines by a leading appliance manufacturer. It was described as typical of the general run of advertising in the industry today.

"Without much stretch of the imagination," McQuiston said after reading the copy, "this could be a tie-in ad to some of those read before except for the one mention of the word 'current.' It is, of course, good brand advertising."

Showing an advertisement for a nationally-known brand of coffee-maker, he observed:

"Most of us agree the product advertised is an excellent example of the flexibility and the accuracy that electricity affords. Yet, odd as it may seem, there is no attempt made to sell these benefits."

"The word electric is mentioned: '50% faster than electric glass coffee-makers.' Yes, it is brand advertising

but does not recognize the fact that most coffee is prepared by fuel fired equipment."

An advertisement promoting a new garbage eliminator was called "probably the most amazing of this series."

"It is amazing," McQuiston continued, "because the garbage eliminator and the electric dishwasher sink depend upon the electrical industry's ability to sell and publicize the all-electric kitchen. Yet, in this ad the word 'electric' is not apparent and there is no tie-in whatsoever with electric living."

Along side this ad was one on a home freezer. This new product needs the great support of the electric utility industry to make it acceptable to the housewives of America, he declared.

"Yet," he remarked, "in this new introduction there is no stress placed upon the advantages of electrical living. It evidently is not clear that one electric product helps another."

### Utilities Must Carry Ball

During this discussion of electrical appliance advertisements, McQuiston repeatedly emphasized that the electrical utilities—not the manufacturers—are responsible for the situation.

"Our interest is in electrical living and we, and only we, are charged with the responsibility of continuing this trend," he said. "This is not necessarily so with the manufacturer of domestic appliances."

"His interest is in making that which he can sell. His products may or may not be operated by electricity. The type he manufactures depends entirely upon the public acceptance of the services available."

"He may find it to his advantage to sell appliances operated by gas, oil, coal, or wood. It is to our advantage to see to it that the trend remains electric, by combating all competition that is aimed at interfering with that trend."

"In this respect it is quite significant when we see manufacturers of electric products changing to competing industries."

"Today one of the largest electric washing machine companies—the Maytag Co. to be specific—is making and marketing a gas range. It is using its fast moving electrical appliance dealer organization and ours to move this competitive merchandise."

"It, too, is significant when such manufacturers as Norge, Bendix, and a long list of others cast their lot with a competing industry."

The speaker recalled that 4,000,000 gas ranges were sold last year, compared to 1,200,000 electric units.

"At first glance this figure looks good because 1,200,000 represents the biggest sales year in the history of the electric range business," he said. "However, let's analyze the figures and see what they mean when we consider long-term market trends."

### Bottled Gas Ranges Pass Electric

"Of the 4,000,000 gas ranges sold, 40% were for LP or bottled gas—or a total of 1,600,000. Think of it, a brand new industry has grown up in our midst and surpassed the best sales year in the electric range in-

dustry. . . . I ask you, can we with truth say that 'The trend is toward electric cooking?'"

"What we need is a good old-fashioned revival on a national scale that will sell America not only merchandise but the acceptance of a method of living. We need to sell this idea completely; not only as an idea in itself but to the exclusion of any other method of living."

He said the electric kitchen and laundry committee believes:

"1. That our competition cannot alone be tackled at a local level."

"2. That the responsibility of selling electrical living rests in the first instance with the electric utilities."

"3. That appliance manufacturers cannot be expected to join in a unified program until we convince them through action that we mean business."

"4. That we as electric utilities develop a national program now if we hope to continue the trend toward electrical living."

"5. That the first step be a national electric kitchen program that is flexible enough to be used by all electric utilities on a local level."

"6. That the electric kitchen program be later enlarged to include electric laundries and other phases of electrical living."

McQuiston was followed on the platform by Harry E. Warren, of The Ralph H. Jones Co., the committee's advertising agency. Warren described the committee's promotional and educational program on the all-electric kitchen, which is scheduled to be ready for use by early fall.

The program is to be used by electric utility companies and local elements of the electrical industry to encourage the sale of electric kitchens in both the new home and home modernization markets. Immediate goal of the campaign, designed to supplement electrical manufacturers' national brand advertising, is consumer education.

Warren explained that the program will be centered around a 40-page "Kitchenizer's Digest."

### Must Back Heat Pump

J. M. Stedman, section chairman, said there is skepticism in utility ranks as well as in distributor and dealer organizations. To illustrate, he read an editorial from a trade magazine indicating that many utility engineers are dubious over the future of the heat pump for homes.

Doubt about the salability of a service like the heat pump, "for which the public is clamoring," must be eliminated, he warned. He said the indoor climate committee's report on the heat pump, now in its fourth printing, "proved that there are many thousands who are hungry for any new information on this application."

He reminded his audience that a broader all-industry committee has been appointed to keep members abreast of all technical and commercial possibilities of heat pump development.

Stedman also reported that complete case histories of successful utility-dealer coordinated promotional programs will soon be made available by the dealer coordination committee.

# This National Advertising is Selling INLAND ICE CUBE TRAYS for You!

It's Appearing in  
THE SATURDAY EVENING POST,  
COLLIER'S and  
BETTER HOMES AND GARDENS

Of the fifteen to twenty million owners of automatic refrigerators, there are thousands, maybe hundreds of thousands, who are *your* customers and prospects, in *your* territory.

All these prospects, *your* prospects, are getting time-after-time sales appeals in the biggest and best magazines—like The Saturday Evening Post, Collier's and Better Homes and Gardens—with the full story of the marvelous new Inland "Magic Touch" Ice Cube Trays. That's pre-selling—making sales and profits for you.

Total Circulation  
Spring and Summer  
nearly 30,000,000

How much market? You know that most homes have outmoded, battered, even useless ice trays—one, two or more of them. *Replacement*—new trays for *present* automatic refrigerators—that's your immediate opportunity for sales and profits. And the new Inland "Magic Touch" Ice Cube Trays are *so much better* that sales are amazingly easy—and profits are quickly made.

### THE TIME FOR PROFIT IS—NOW!

Get your share of these sales. Today, before you forget it, order Inland "Magic Touch" Trays from your manufacturer or jobber. Give them front display. Push them to service customers. Ride the wave of profits. And for continuing bigger sales and profits, *insist* that the refrigerators you sell come factory-equipped with Inland Trays.

INLAND MANUFACTURING DIVISION  
General Motors Corporation • Dayton, Ohio

"Magic Touch"  
ICE TRAYS BY INLAND



**So Quick! So Easy!**  
big sparkling ice cubes freed instantly...

**Like Magic!**  
ice cubes in a twinkling!

**NEW INLAND "Magic Touch" ICE CUBE TRAY**  
Frees Plenty of Big Sparkling Ice Cubes Instantly

So simple! Just lift the "Magic Touch" lever, gently. The grid rises easily. There are your ice cubes—dry and free. No more melting, no more water. The rest will be instantly in the tray! Use one or more cubes now. The rest you can have it, in ready later. You've always wanted that. Now you can have it. In your automatic refrigerator, with Inland "Magic Touch" Trays. And no more! Sticking trays?—splashing at the sink?—ice cubes on the floor?—melted, wasted cubes? Up to now, maybe. But no more! All that's out—with Inland "Magic Touch" Trays. Made of sturdy aluminum for faster freezing and longer life. **Now Available at Leading Dealers.** For your present refrigerator, get "Magic Touch" Trays from refrigerator dealers, or other stores. And insist that your new refrigerator have them. INLAND MANUFACTURING DIVISION, General Motors Corporation, DAYTON, OHIO

**INLAND "Magic Touch" Tray**  
"Magic Touch" Tray  
"Magic Touch" Tray

The Multiplex Bar Dispenser Is A "LIFETIME FIXTURE"

## DISTRIBUTORS WANTED!

If you are in a position to handle sales, installation, and service for Multiplex Fixtures to Bars and Taverns—it is quite possible for you to add \$50,000 or more in sales per year.

**NEW MODEL 14 Multiplex**  
STAINLESS STEEL  
UNDER-BAR, SOFT DRINK  
DISPENSER

ONE—TWO OR THREE FIXTURE INSTALLATIONS

NOTE: simple, sturdy construction.

- MANUFACTURES, fresh carbonated soft drinks (seltzer, cola, lemon, ginger-ale, etc.) as easily as drawing a glass of beer.
- ELIMINATES BOTTLES—SPEEDS BAR SERVICE
- INCREASES THE PROFITS OF BARS TREMENDOUSLY

WRITE US FOR ILLUSTRATED BULLETIN AND PRICES

**MULTIPLEX FAUCET CO. Manufacturers**  
4325 Duncan Ave. Dept. ARN-14, St. Louis, Mo.  
Manufacturers of Soft Drink Dispensers for Over 40 Years.





# "SWELL TIME" ICE CREAM TRUCKS EQUIPPED WITH SERVEL SUPERMETICS

## Servel's Top Performance, Hermetically Sealed Design Gain Favor of this Prominent User

Before the Swell Time Ice Cream Company entered the field of house-to-house retail selling, they experimented for several months with various methods of refrigerating delivery trucks. Different types of condensing units—built into refrigeration systems of almost every description—were given trial runs to find out which type of assembly was the most practical and economical to operate.

These tests showed that sales trucks equipped with Servel Supermetic units were the answer to their requirements. It was proved that Supermetics, connected to hold-over plate coils, could pull the temperature down in a minimum of time. And in trucks garaged for the night, the system "stored up" adequate refrigeration to accommodate leakage and service the next day.

### Compact, sealed design favored

While the Supermetic's excellent performance was the most important factor in selecting this unit, "Swell Time" also favored Servel's compact, sealed-in design. A sealed unit is not only desirable for retail selling "at the curbstone," but almost a necessity. Youngsters at times literally "swarm all over" these purveyors of frozen goodies. The sealed-in moving parts protect the unit from breakage or tampering . . . and also protect the enthusiastic customers from injury at stops where the unit might be in operation.

### Entire fleet to be Servel-Equipped

Servel Supermetics were first installed in 75 trucks of the "Swell Time" fleet. Their performance proved so

successful that the company decided to equip additional trucks similarly. An expanded fleet numbering more than 400 units is expected to be in operation before next season arrives.

### Check your local fleet operators

Wide-awake Servel dealers and distributors will find a profitable market in this and other mobile refrigeration installations. Make a complete check of the fleet operators in your community. Their need for dependable, trouble-free refrigeration presents a real opportunity for quantity sales.

For more than ten years Servel has consistently developed smaller, lighter, higher speed compressors. Today eight compact fractional horsepower Supermetic models are available for a wide variety of truck refrigeration jobs. In the integral HP sizes, Servel Supermetic is ideal for larger trucks using hold-over evaporators. Modern Servel belt-driven compressors offer equal advantages for long-haul applications where the compressor must be operated by means of power take-off or gas engine.

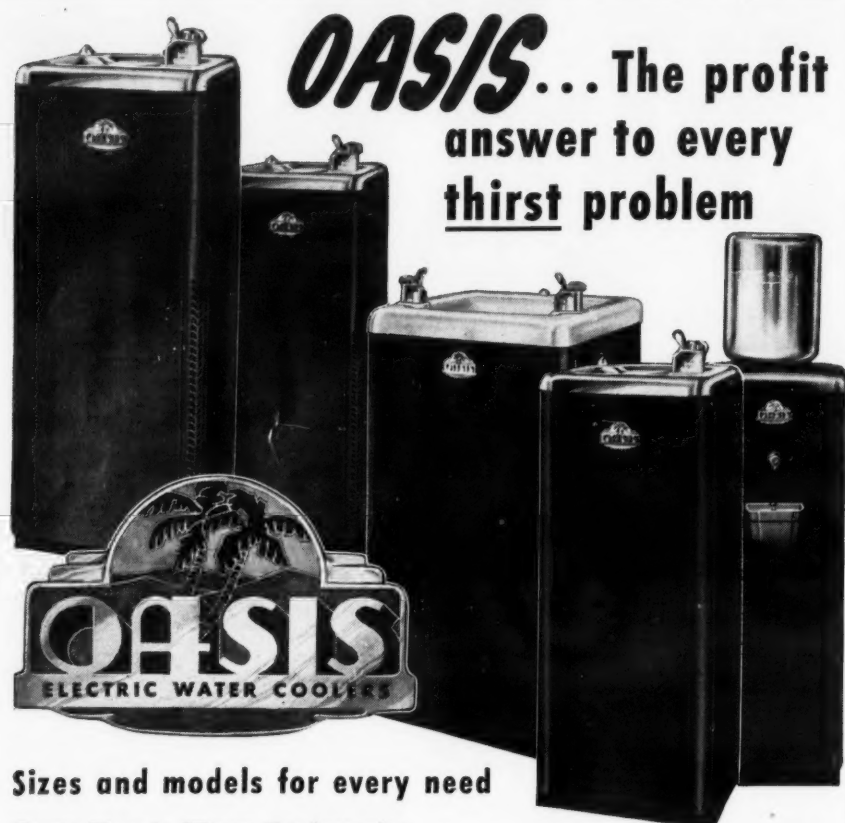


A Servel Supermetic  $\frac{3}{4}$  HP condensing unit requires a minimum of space in its compartment adjacent to the driver's seat of a "Swell Time" sales truck, one of a large fleet operated by this prominent ice cream firm.

Servel's compact, lightweight Supermetic units and belt-driven compressors are ideal for every mobile refrigeration requirement. Specification and application data on request.







### Sizes and models for every need

OASIS Electric Water Coolers give you the winning answer to profits in the drinking water cooler field. They lead with selling features, in space-saving compactness . . . cabinet beauty . . . low-cost, low-maintenance operation . . . and rugged durability. Available with glass-fillers, or the famous Ebco "dial-a-drink" bubblers—or with both—in

5, 10 and 20-gallon sizes. Also bottle-type electric water coolers. Models for either AC or DC operation. Water-cooled models with air-sealed cabinets for mills and foundries. And remember, *the world's largest maker of electric drinking water coolers builds OASIS*. Write for full details today!

The EBCO Manufacturing Company, Columbus 8, Ohio

## Reorganization--

(Concluded from Page 1, Column 4)  
of \$100 or less are to be paid in full, while those unsecured claims of \$100 or more will be paid as follows:

Forty per cent within five days of the consummation of the plan; 24% in 12 monthly payments of 2% beginning 90 days after the plan is approved followed by 36% in 12 monthly payments of 3% during each month.

In addition to this arrangement, the plan would also give the company a six-month option to pay each unsecured creditor 75% of the amount of his claim in cash to satisfy in full such claims.

All expenses of administration and other allowances permitted by the court are to be paid in cash. Claims of the U. S., New Jersey, and Illinois governments are to be paid in full or adjusted, while wage claims for three months prior to the filing of the petition for reorganization (but no claims in excess of \$600) are to be paid in full.

Secured claims of the Lincoln National Bank and the American Business Credit Corp. are also provided under terms of the plan.

As for the stock, a new class of common stock will be created which will be offered on a share-for-share basis for the present preferred and A and B common shares.

No dividends will be paid on the new stock until six months after all claims have been settled in full, including the new \$20,000 loan under the proposed reorganization plan. Dividends accumulated on the preferred stock are to be canceled.

## Model with Left-Hand Door Resumed by Westinghouse

MANSFIELD, Ohio—Production of Westinghouse refrigerators with left-hand doors, discontinued during the war, will begin again in May, G. H. Meilinger, manager of the Westinghouse home refrigeration department, has announced.

These units, which will correspond with the five conventional models currently in production, will be available in limited quantity at a retail price \$5 higher than the corresponding right-hand door model, he said.

Meilinger pointed out that considerable engineering changes and redesigning went into the development of these models. He added that Westinghouse had hoped to postpone manufacture of these units until next year.

## Central Michigan NERA Chapters Meet April 23

LANSING, Mich. — Four central Michigan chapters of NERA, comprising the counties of Livingston, Washtenaw, Jackson, Ingham, Eaton, Clinton, Shiawassee, Genesee, and parts of nearby counties have pledged attendance of their member dealers at a joint conference of appliance-radio dealers and distributors serving their area.

The conference will be held at the Hotel Porter, Lansing on April 23 at 6:30 p.m. NERA Managing Director Clif Simpson will be guest speaker.

Purpose of the conference is to acquaint the distributors with the NERA 1948 Program.

General chairman for the meeting is James A. Dart, Dart & Cady, Mason, Mich., Secretary of the Lansing Chapter of NERA. Chapter Chairman Ron Garlock of Garlock Sales Co., Lansing, will preside.

## Bendix Buys Rand--

(Concluded from Page 1, Column 3)  
never made any sales of its product. Total assets are reported to be \$32,980.71 of which \$15,552.61 consists of patent applications.

Bendix motive in acquiring Rand, according to Bendix officials, is "to diversify the type of product which it sells so that its future will not be dependent to such a large extent upon a single type of washer." They would offer no prediction as to when the new washer might reach the production stage.

Bendix last February took an option on the Rand stock for which it paid \$149,252.75. The option agreement further provided that once the unit was put in production, Bendix would pay Rand stockholders royalties on Rand sales according to a specified scale.

In making his quarterly financial statement to stockholders, Judson S. Sayre, noted a slight increase in net sales during the first quarter over the corresponding quarter last year. Comparative figures were \$17,397,148.02 and \$17,269,393.18.

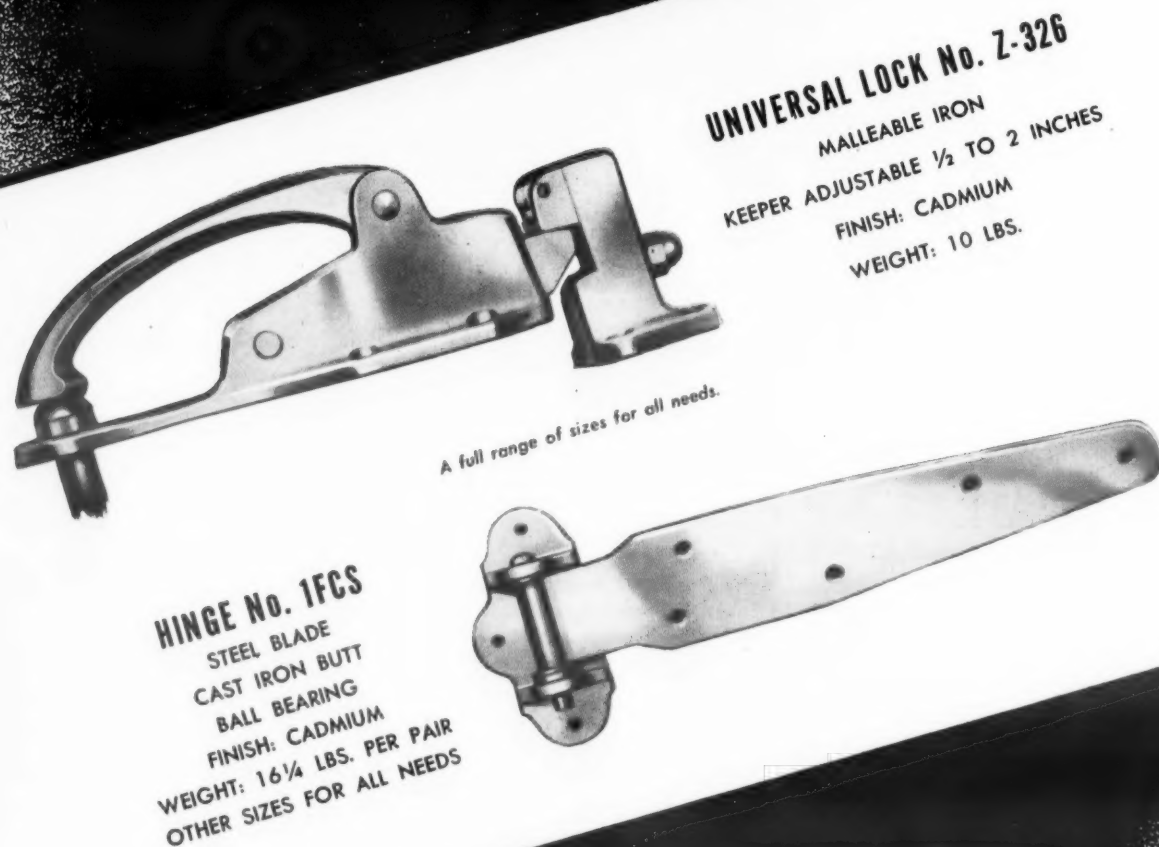
However, due to increased costs of raw materials and manufacturing, and the changeover to new models, net profits, after Federal income taxes, depreciation, and amortization, were approximately \$800,000 under those of the first quarter last year, he said.

## J.F. Ganley Dies After 2-Year Illness

HUDSON, Wis.—J. F. Ganley, 59, formerly president of the United Refrigerator Mfg. Co., died on April 9, enroute from California to his home in Minneapolis. He had been ill for over two years. He relinquished his interests in United last September and spent the winter in Arizona.

Mr. Ganley joined United in 1939.

*A Smooth*  
"open and shut" proposition  
... special for  
**WALK-IN COOLERS**



**UNIVERSAL LOCK No. Z-326**  
MALLEABLE IRON  
KEEPER ADJUSTABLE 1/2 TO 2 INCHES  
FINISH: CADMIUM  
WEIGHT: 10 LBS.

**HINGE No. 1FC5**  
STEEL BLADE  
CAST IRON BUTT  
BALL BEARING  
FINISH: CADMIUM  
WEIGHT: 16 1/4 LBS. PER PAIR  
OTHER SIZES FOR ALL NEEDS

Good hardware—smart in appearance, as efficient and durable as it is good looking.

Write for full specifications

**ARCADE**

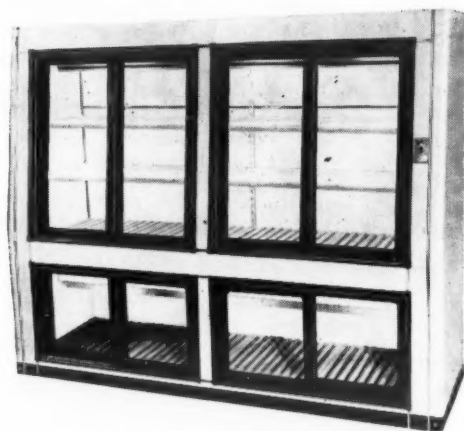
MANUFACTURING DIVISION  
ROCKWELL MANUFACTURING COMPANY  
FREEPORT, ILLINOIS



**the ODDS for SUCCESS ARE WITH YOU!**

**WHEN YOU CARRY THE COLDIN LINE**

Proved again by the comments and enthusiasm of dealers and storekeepers, COLDIN Cabinets and Show Cases are ideal in beauty and maximum refrigeration.



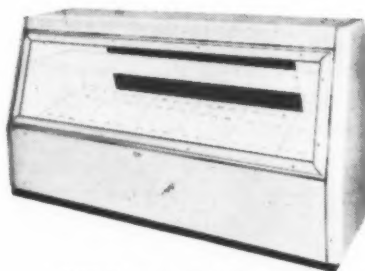
MODEL WDS DAIRY WALL CASE



MODEL 4-FD FULL VISION CASE

You're sure to make a hit with customers on your sales floor. For, whether you carry one or more of the COLDIN line, you profit from our nation wide promotion plan.

COLDIN gives your customers America's smartest refrigerators for serving the trade efficiently and promptly . . . for their life-long satisfaction and your increased sales and profits.



MODEL DD-4 BUTCHER CASE

**COLDIN**  
YOUR KEY TO  
BETTER REFRIGERATION

FRANCHISES ARE STILL AVAILABLE FOR CERTAIN TERRITORIES.  
WRITE OR CALL FOR OUR LATEST LITERATURE

**COLDIN CABINET CO., Inc.**  
2800 WEBSTER AVENUE, BRONX 58, N. Y.  
TEL. SEdwick 3-5833



# IT'S NOT LUCK-IT'S NOT CHANCE IT WAS GOOD PLANNING

that made the 3 profit makers of '48 all **JORDON**

## JORDON 10/4

### STORAGE SPACE FOR EVERYTHING...

Ideal for large city homes, estates, boarding houses, farms, clubs, etc. Designed with all the modern features and details demanded by the most critical consumer. Furniture stores, Appliance dealers, Department stores, Building supply dealers, and other outlets reaching mass buyers can sell hundreds of this model to both domestic and commercial users. The **JORDON 10/4** has 10 cu. ft. of Normal Temperature (40°) space and a 4 cu. ft. freezer-locker (0°)—yet its overall size is only slightly larger than that of an average domestic refrigerator.

• **SPECIFICATIONS**—HEIGHT: 68", WIDTH: 39", DEPTH: 29", **EXTERIOR FINISH**: White Hi-Baked Dulux on Bonderized steel. **INTERIOR FINISH**: Hi-Polished Stainless Steel. **HARDWARE** (semi-concealed type): Chrome on Brass. **SHELVES**: 5 (normal temperature zone). **ICE CUBE TRAYS**: 6 (84 big cubes per freezing. Approx. 12 lbs.). **AUTOMATIC INTERIOR LIGHT**. **INSULATION**: 4" FIBREGLAS. **COMPRESSOR** 1/4 H.P. Kelvinator, Hermetically Sealed. **APPROX. SHIPPING WEIGHT**: 680 lbs. approx.

## JORDON 14/6

### BRIDGE THE GAP BETWEEN DOMESTIC AND COMMERCIAL SALES

Thousands of installations prove that the **JORDON Model 14/6** is the perfect answer to the need for an "in-between" size refrigerator. 14 cu. ft. of normal (40°) storage and 6 cu. ft. of freezer-locker (0°) storage make this model ideal for large family homes, farms, and for many commercial installations in hotels, cafes, restaurants, clubs, hospitals, institutions, etc. You can do more business, enter new fields, show greater profits with the **JORDON Model 14/6**. Users like the one condensing unit and one simple control which provides simple plug-in installation and economical operation. Additional specifications include: **HEIGHT**: 71 1/4", **WIDTH**: 43 1/2", **DEPTH**: 30", **INTERIOR FINISH**: High-polish stainless steel. **AUTOMATIC LIGHT**. Seven (7) ice-cube trays, 98 cubes, 16 lbs. **LOCKER DOORS**: 2, insulated. **EXTERIOR FINISH**: Hi-baked White Dulux or Stainless Steel. **HARDWARE**: Heavy, chrome plated. **AUTOMATIC door latch**. **CONDENSING UNIT**: Hermetically sealed, **KELVINATOR**—1/4 H.P. **SHIPPING WEIGHT**: 785 lbs. approx.

## JORDONETTE

### THE SMALL REFRIGERATOR WITH THE BIG FEATURES

The **JORDONETTE** has full 3 1/2 cu. ft. capacity, 2 ice cube trays, automatic interior light, porcelain interior and a practical **PORCELAIN WORK-TABLE TOP**.

The market includes: kitchenettes, professional offices, studios, recreation rooms, trailers, field offices, and other places where a small but completely equipped refrigerator is essential.

**SPECIFICATIONS**—HEIGHT: 34 1/2", WIDTH: 24 1/2", DEPTH: 25 1/2", **GROSS CAPACITY**: 3 1/2 cu. ft. **EXTERIOR FINISH**: Porcelain work-top, front and sides, Hi-baked White Dulux on Bonderized steel. **INTERIOR FINISH**: White Porcelain—rounded corners. **AUTOMATIC LIGHT**. Two (2) ice trays. **INSULATION**: fibre-glas. **HARDWARE**: Heavy, chrome-plated. **AUTOMATIC door latch**. **CONDENSING UNIT**: 1/4 H.P. Hermetically sealed.



### Plan it Right! Build it Right! Price it Right!

Back it with effective promotion. That, in a nutshell is the essence of **JORDON** policy—and the reason why **JORDON** has been able to produce these style, quality and profit leaders and to carry them so quickly to the topmost rung of sales success. That is what **JORDON** has been promising you—and that is what you have been getting. More sales, more profit, wider marketing opportunities.

**FIVE YEAR PROTECTION PLAN AVAILABLE ON ALL HERMETICALLY SEALED UNITS**

### PROSPECTIVE JORDON DEALERS AND DISTRIBUTORS— ACT NOW!

Although we have almost doubled our manufacturing facilities in recent months the increasingly heavy demand means production will be overtaxed. If you are interested in all or part of the **JORDON** line for your territory PLEASE MAKE YOUR INQUIRY NOW. THERE IS STILL TIME TO PROFIT ON THIS SEASON'S BUSINESS.



A COMPLETE LINE • A SMART LINE • A PROMOTION LINE

**Jordon**  
AMERICA'S MODERN COMPLETE LINE  
**JORDON REFRIGERATOR CO.**

Factory and Sales Division  
58th St. and Grays Ave., Phila. 43, Pa.  
CABLE: "JORDONREF" BEIgrade 6-4510



# ROGERS Dry Beverage Cooler

With disappearing lids  
Allowing every section to be used simultaneously.



Runners, lids and moulding of stainless steel  
39" high; 30" wide; 4, 6, 8, or 10' long.

Write for catalogue showing this quality line of refrigeration.

DEALERS  
WANTED

Write, wire or phone today for information on franchise.

Immediate Delivery!

W. ALLEN

ROGERS

Industries

BOX 272-AC

DEMOPOLIS, ALA.



The Thom McDermott Flower Shop walk-in has a front display section where customers can see some of the flowers kept under refrigeration.

## Florists Save Time by Preparing Sprays Inside Walk-In Fitted with Water Tanks

PHILADELPHIA — Specially designed to reduce handling costs and avoid waste in the preparation of floral displays, a custom-made walk-in refrigerator with unusual features has been erected in the new flower shop of Thom McDermott here.

The job was engineered and installed by Gem Refrigerator Co. here to meet the requirements drawn up by McDermott, who has operated a

florist shop for several years and carefully studied his cost records.

Considerable time is wasted by florists and their employees in the preparation of floral arrangements, he contends. Much of this wastage occurs in the apparently endless carrying of flowers from the refrigerator to the work room and thence back again.

Taking the flowers from the containers, replacing them, and refilling the containers with water added up to time-consuming operations for well-paid employees, McDermott found. In addition, water is often spilled on the floor where employees or customers may slip and seriously injure themselves.

This problem and that of saving time McDermott believes he has licked now in his new store at 5226 Woodland Ave. where most of the flower arrangements for the old store will also be made.

Essentially, the answer proved to be a walk-in refrigerator fitted with containers lined with copper tanks of varying depths, connected to indi-

vidual drains, in which the flowers could be placed. There are also individual water taps for filling the tanks.

The refrigerator itself measures approximately 25 ft. long, 9 ft. wide, and 9 ft. 6 in. high on the inside. The sides and rear are constructed of kiln-dried lumber chemically treated to prevent sweating or warping. Between the inner and outer wood walls are cork slabs and asbestos insulation.

Floor of the refrigerator is laid directly on a 3 in. concrete base, there being no basement beneath the store. It is built up of 1/2 in. of tar, 3 in. of cork, and 5 in. of concrete. The top concrete lining tapers to a 3-in. thick section at the drain in the center of the refrigerator.

Front section of the refrigerator facing into the store combines a stainless steel exterior and a large show window to display flowers under refrigeration. This front section is divided from the longer storage section in the rear, but there is an interconnecting door. Space is also allowed at top and bottom of the partition for free circulation of cooled air from the rear section.

There are two cold-storage type doors on the side the refrigerator, the forward door leading to the front display section; the other to the storage room.

Depth of the metal-lined water tank varies from 10 in. to 24 in., the deeper tanks being placed directly on the floors while the others are raised up to a convenient level.

Above the tanks are shelves to store completed sprays, baskets, corsages, etc., where they may "harden" before delivery.

Refrigeration is supplied by a 2-hp. Brunner water-cooled condensing unit connected to two Bush VC-85 unit coolers suspended from the ceiling in about the center of the refrigerator.

The Bush units face in opposite directions to insure full refrigeration of the enclosure. The system is thermostatically controlled to maintain constant temperature of 45° F.

With this refrigeration equipment now in operation, 50% of his employee's labor time has been saved, McDermott estimates. When delivering flowers to the store, wholesalers now simply place them in the tanks in the refrigerators, and the employees no longer have to bother with vases and filling them or emptying them with water.

## 'Workroom' Inside Walk-In



Door at far end connects with front display section. One in foreground, left leads to store. Note how unit coolers face both directions for maximum air circulation.

## FOR ECONOMICAL OPERATION

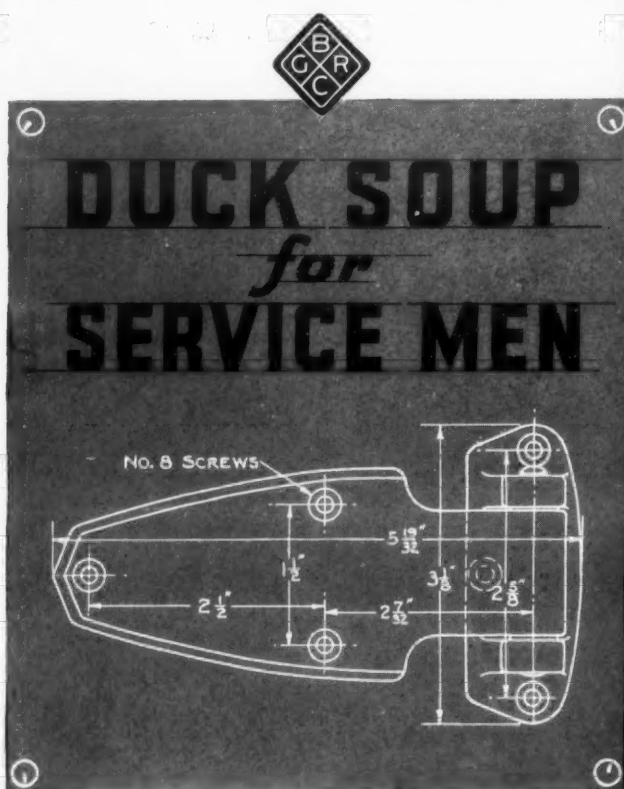


on your next job choose a

# MILLS

a condensing unit for every installation

Mills Industries, Incorporated • 4100 Fullerton Avenue • Chicago 39, Illinois



It's the easiest kind of extra money . . . replacing old, worn-out refrigerator hardware with sparkling new Grand Rapids Brass locks and hinges! Every service call spells extra-profit opportunity—a chance to double or triple your day's income. Our new installation manual tells how—gives simple, complete replacement instructions for any kind of job. See your jobber about a copy—or write direct for your free manual today!



No. 15345 REVERSIBLE HINGE. The most widely useful replacement hinge in our line . . . available NOW from your jobber in a full range of offsets.

No. 15345 FLUSH HINGE for those popular flush doors.

No. 15352 STOP HINGE. When you need it, you need it bad! You can get it now from your jobber—with 105° or 135° Stop, in a full range of offsets.

DESIGNED TO FIT THE JOB. Above you'll see three versions of just one of the many hinges available in the Grand Rapids Brass line. Our new installation manual pictures many other hinges and locks—gives full information how to choose and order hardware for any replacement job. With this information in your kit, you can go to town. Get ALL the facts TODAY!

by America's Quality Manufacturers of Commercial Refrigeration Hardware

# Grand Rapids Brass Company

Division of CRAMPTON MANUFACTURING COMPANY  
Grand Rapids 4, Michigan



## Pre-Packaging Has Aided Growth and Volume of Self-Service Groceries

CHICAGO—The advent of pre-packaged foods has helped to set off a chain reaction that during the past four to nine years has had far-reaching effects on the grocery store field.

For pre-packaging foodstuffs has permitted more stores to go self-service, which has led to a larger volume of business for this type of grocery, which has led to larger markets, which has led to a greater amount capital needed to operate these stores, which has led to a decline in the percentage of individual ownership.

Figures cited in a recent survey of 1,959 independent grocers by the National Association of Retail Grocers and the *Saturday Evening Post* disclose that about 25% more stores use at least some self-service features than did so in 1944.

The increasing number of self-serve groceries has reduced but not eliminated the need for clerks. As shown by the survey, most stores (55.6%) still use clerks in some sections. A total of 23.2% are all self-serve and the remainder all-clerk. Four years ago all-clerk stores numbered 47% of the total and all self-serve only 14%.

In 1939 it is claimed that nearly two-fifths of the total retail grocery volume was handled by self-serve stores. The Super Market Institute estimated last fall that the current percentage would run to something like 57%.

As an off-shoot of this rise in volume, the size of grocery stores has grown to where about 5% less are individually owned than was the case four years ago. The number of partnerships has reflected an increase of 17.3% to 22.7%, the survey further noted.

Grocers estimate that pre-packaged foods and canned goods comprise 31% of all independent sales and meats, 28%.

## Refrigerated Bags Take Ice Cream 3 Times as Far Without Melting

MIAMI, Fla.—A simple way to forestall potential complaints from customers that ice cream bought from self-service refrigerators and placed in take-home bags will melt before it reaches the table has been developed by the Tip-Top Supermarket here.

All that is necessary to insure that the customer can get her ice cream home in perfect condition is to refrigerate not only the ice cream, but the heavy insulated bags which the market supplies for carrying the ice cream, according to the management.

The Tip-Top Supermarket uses a heavy paper bag, with an insulating cellulose layer, which are given free to ice cream purchasers. Formerly these were merely laid atop the self-service case in which 13 varieties of popular ice cream flavors are shown. When high outside temperatures, however, began resulting in soft, runny ice cream, melting while the customer carried it home, the idea of refrigerating the bag was born.

Enough space is left between stacks of ice cream cartons in the refrigerator to keep about 25 of the bags chilling simultaneously. Due to their heavy construction, and air-sealing top when rolled down, the bags show a high cold-retention factor, and will carry the ice cream at least three times as far before any danger of meltage occurs.

## Wholesalers Move 3% More Than In January

WASHINGTON, D. C. — Wholesalers sales during February were up nearly 6% over February, 1947 in dollar value and were 3% above the January level, the U. S. Department of Commerce has announced.

Wholesalers moved \$5,007 millions last February compared with \$4,732 millions in February, 1947.

Durable goods led non-durables in the amount of increase, rising from \$1,599 millions last year to \$1,756 this year. However, durable goods were off 1% from January, 1948.



**Lowest Cost**  
**PER CUBIC FOOT**  
**USABLE**  
**REFRIGERATION**  
**SPACE**  
**IN THIS SIZE RANGE**

**THE ARTKRAFT**  
**BEV-FOOD**  
A High Quality Self-Contained "Plug-in" Unit

The Only Combination Food and Beverage Cooler That Can be Operated Wet or Dry. Each Compartment Can be Used Entirely for Dry Refrigeration. Top Opening Prevents "Spill-Out" of Cold.

**RETAILS AT ONLY \$385 (f.o.b. Factory)**

**The**  
**Artkraft Manufacturing Corp.**

Quality Products for more than a Quarter of a Century

200 KIBBY ST., LIMA, OHIO, U.S.A.

### IDEAL FOR:

RESTAURANTS	SODA FOUNTAINS
DAIRY STORES	BOWLING ALLEYS
HOTELS	MEAT MARKETS
TAVERNS	DELICATESSENS
FISH MARKETS	CANDY STORES
HOSPITALS	DRUG STORES

### SPECIFICATIONS:

Sealed cabinet: 65 $\frac{3}{4}$ " x 38" x 29 $\frac{1}{2}$ "  
Solid 3" insulation—Vermin-proof  
Top compartment: 35 $\frac{3}{4}$ " high x 20 $\frac{3}{4}$ " wide x 15 $\frac{1}{2}$ " deep (Slightly over 6 $\frac{1}{2}$  cu. ft.)  
Food compartment: 21 $\frac{1}{4}$ " wide x 28 $\frac{7}{8}$ " high x 20 $\frac{3}{4}$ " deep (Slightly over 7 $\frac{1}{2}$  cu. ft.)  
Total storage capacity: 14 cu. ft.  
Finish: Exterior—Silver Blue  
Interior—Porcelain enamel  
Top and 2 sliding covers, stainless steel  
Condensing Unit:  $\frac{1}{4}$  H. P., twin-cylinder air cooled Equipped with Tecumseh, Universal Cooler, or Copeland unit  
Motor:  $\frac{1}{4}$  H. P., 60 cycle, single phase, 1750 r.p.m., 110 volts, capacitor type  
Refrigerant: F-12 Freon  
Automatic light in food compartment  
8-point cold control

### DEALERS:

Ask your distributor for this great profit-maker—or write us for his name. Distributed in many areas by G. E. Supply Corporation.

### DISTRIBUTORS:

Write for details of franchise for open territory

THIS COUPON FOR YOUR CONVENIENCE

THE ARTKRAFT MANUFACTURING CORPORATION  
200 KIBBY ST., LIMA, OHIO, U.S.A.

- ☐ Please send the name of the BEV-FOOD distributor in this territory
- ☐ Please send details of distributors' franchise

NAME.....

FIRM.....

CITY.....



### Largest Retail Cooling Job In Carolinas Goes to York

CHARLOTTE, N. C.—The huge Belk Bros. Co. department store here will be air conditioned at a cost of more than \$300,000, according to W. H. Belk, president.

"Contract for the job has been awarded to the York Corp. and the work will begin immediately," Belk stated. "It will be completed as quickly as possible."

He added that George W. Dowdy, general manager of Belk Bros., and other officials of the company have been working on plans for the air conditioning work since last fall.

Officials of the York Corp. describe this as the largest air conditioning job to be awarded by any retail business concern in the Carolinas.

### Gene Harris Appliances Opens

SOUTH GATE, Calif. — Gene Harris Appliances is the firm name under which Eugene Wayne Harris has published a certificate that he is conducting business at 4921 Firestone Blvd., South Gate.

### ERP, Coal Strike Prompt Agents To Buy Cautiously

NEW YORK CITY—Four factors are contributing to the "extremely cautious" purchasing being done now throughout industry, a recent report by the National Association of Purchasing Agents declared.

These are declining order backlogs, war talk, the coal strike, and uncertainties about European aid plans. However, the report said, the decline in quantity of purchases is in direct proportion to the decline in order backlogs.

The report noted that 34% of member purchasing agents have found their backlogs fading away, while only 14% found theirs increasing.

Inventories for March, it declared, were lower than for February and show indications of shrinking still further.

It added that worker productivity and production efficiency are improving while material supplies are approaching closer balance with the demand.

### Law Asks Milk Houses To Install Water Heaters

MINNEAPOLIS—Each dairy farm within a 50-mile radius of the Twin Cities area will be required to have a water heater in the milk house after May 1, according to a recent announcement.

At that date those farms supplying milk for the Twin City market will come under the control of the standard U. S. Public Health Ordinance. Present figures indicate that only one out of four farms are so equipped with water heaters, it was stated by North Central Electrical Industries, local utility.

Rural men, who recently conferred with L. H. Hill of the Twin City Milk Producers Association, have agreed that 12-14 gallons of 170° water is needed to wash and warm the floor of the milk house at each milking.

As a result 35 or 50-gallon storage-type water heaters may be needed to supply a sufficient amount of hot water on the most economical basis.

### Sales Offices, Showroom Remodeled by Gartner Co.

MINNEAPOLIS—Addition of two new distributorships and completion of a \$2,000 sales offices and showroom remodeling program has been announced by H. R. Gartner, president of Gartner Refrigerator Co.

The company is now the Minnesota distributor for Fedders-Quigan window-type room conditioners and the Adiabatic evaporated window-type room conditioners manufactured by the American Metal Products Co. of Fort Worth, Tex. Gartner's already handles Frick refrigeration and Mills ice cream freezers.

In addition to the \$2,000 building program, Gartner's also has added two new cars for its salesmen, swelling its fleet of cars and trucks to five.

### Aurora Files Name In New York

BUFFALO—A business name has been filed in the Erie County clerk's office for the Aurora Refrigeration Service, 297 Aurora St., Buffalo, by Harold F. Teufel.

### Myers Named Temporary Head of New Contractors Group In So. Minnesota

MANKATO, Minn.—Roland Myers of Myers & Sons, Mankato, was elected temporary chairman of the Refrigeration Contractors' Association of Southern Minnesota during the organizational meeting here this month.

Other officers elected were Robert Bigelow of Bigelow Refrigeration Co., Rochester, vice-chairman; Don Enke of Allied Refrigeration Co., Rochester, secretary; and Erv Larson of Commercial Refrigeration Co., Faribault.

Thirteen contractors from Mankato, Rochester, Albert Lea, and Faribault attended the initial meeting. Also present at the meeting was Art M. Palen of Palen Refrigeration Service Co., St. Paul, treasurer of the National Association of Refrigeration Contractors, who outlined the advantages of a local organization and assisted in the group's organizational activities.

The group voted to hold the second meeting at Owatonna, Minn., on April 21.

This is the second area group that has been formed within the past two months. Palen assisted in organizing the Refrigeration Contractors Association of Central Minnesota and attended the first meeting on March 12. At that time M. F. Burrows of Burrows Service Co., St. Cloud, was elected chairman, and C. L. Flemming of Flemming Refrigeration Co., St. Cloud, secretary-treasurer.

The Twin Cities Refrigeration Contractors' Association and the Refrigeration Contractors' Association of Duluth-Superior area are the other two groups in the state.

"When all the groups are completely organized," Palen said, "it is our hope to form a state council which will have representatives from each of the area groups."

### Wolverine's Decatur Mill To Be Completed In 1948

DETROIT — Construction of the new tube mill in Decatur, Ala. by Wolverine Tube Division of Calumet & Hecla Consolidated Copper Co., is well underway and will be completed this year, report officials of the Wolverine Tube Division.

As an expansion of their present facilities, the new mill is being erected on the company's 264.75 acres of land on the shores of the Tennessee River.

Construction on the site will include a mill building totalling 298,000 sq. ft.; engineering building, 31,000 sq. ft.; electrolytic building, 25,000 sq. ft.; boiler house, 6,500 sq. ft.; laboratory, 5,500 sq. ft.; and a gate house of 2,300 sq. ft.

When completed, the mill will employ approximately 350 people. It will manufacture seamless non-ferrous tube.

# WESTINGHOUSE WATER COOLERS ARE GOING PLACES!



## with Dealer Helps for a Long Profit Haul!

Going places is right! With a completely redesigned and restyled line of Water Coolers, Westinghouse offers you a shower of dealer helps to help you sell. It's a complete package . . . everything from a planned sales training meeting to direct mail suggestions.

• "AVOID WATER STARVATION", a colorful eight-page selling folder which may be used for direct mail activity or as a selling book at the point of sale.

• COMPLETE CATALOG, containing separate Specification Sheets for each Water Cooler model in the line. Invaluable to your salesmen.

• APPLICATION CHART, determines the Cooler best suited to the prospect's needs, simply and quickly.

• WALL CHART DISPLAY, beautifully colored, will give you a full-line display even when used with a limited number of models.

• SALES TRAINING SOUND SLIDE FILM, "The Water Cooler Feature Story", dramatically covers the features of these new Water Coolers.

• PROMOTION GUIDE. Twelve pages jam-packed with selling suggestions and marketing ideas, plus ad mats, suggested direct mail letters and descriptions of all the above materials.

For further details, see your local Westinghouse Distributor.

WESTINGHOUSE ELECTRIC CORPORATION • Electric Appliance Division • SPRINGFIELD 2, MASS.

# Westinghouse Water Coolers

WITH THE 5-YEAR PROTECTION PLAN

for draft and bottle beverage coolers...

IDEAL  
Speed-Freeze  
PRODUCTS

IDEAL COOLER CORPORATION  
2953 EASTON AVE., ST. LOUIS 6, MO.

insist on  
genuine

Marlo

products

MARLO-HEAT TRANSFER  
Since 1925



## 'Rent-A-Machine' Plan Ups Sales of Automatic Washers

WORCESTER, Mass.—A coin-metered automatic washing machine installed in private homes has proven to be a considerable sales stimulant in the Worcester, Mass., area. According to Irving J. Walker, president of Walker Electrical Supply Co., local distributor of Laundrall, a "Rent-A-Plan" sales method has been "enthusiastically accepted" by home owners in this section.

A 10-pound wash in the machine is allowed with each deposit of a 25-cent coin in the meter.

"For a moderate installation fee, meter-equipped Laundrall is installed in private homes," Walker explained. "We limit these installations, however, to families owning their own homes as well as having either an infant or three or more children. We have found that financial risk and return can be justified only when these two considerations are observed."

If the home owner decides to purchase the machine after a reasonable length of time, usually 90 days, all sums previously collected from the meter are applied to the purchase price, he said. The sum remaining can be financed in 24 equal monthly payments. Walker stressed the point that the installation was in no way contingent on an implication or agreement for future purchase.

Pilot meter promotion broke in Springfield, Mass., and was sponsored by Hadley's, an electrical appliance dealer. The response was so gratifying that associated stores in Worcester, Mass., and Waterbury, Conn., were immediately added to the program. New England Laundrall dealers promoting "Rent-A-Plan" are now located in Milford, Worcester, Springfield, Holyoke, and Pittsfield.

Another typical experience with this promotion was that of Electronic Sales in New Haven, Conn. On March 1 Electronic placed one 40-in. ad in a local paper for a dealer. "As a result," Walker declared, "by the evening of March 4, the dealer received over 200 telephone calls, 100 letters, and heavy store traffic."

### Nadritch Is Bickford General Sales Manager

BUFFALO—Irving A. Nadritch has been appointed general sales manager of Bickford Brothers Co., appliance distributor, President Paul Wolk announced.

### Here's Your Opportunity

Some choice territories are now open for dealers and distributors to handle the high quality line of STEINHORST Freezers and Electric Milk Coolers. Write today stating qualifications.

EMIL STEINHORST & SONS, INC.

Box 209,  
Utica, New York

## MARSH

### Pressure Gauges Dial Thermometers

★The gauge with the  
Recalibrator

Ask for this New  
Refrigeration Booklet

JAS. P. MARSH CORP.

Dept. O, Skokie, Ill.

### ICE PLANTS

3 to 30 ton Capacity. Freon or Ammonia. Diesel or Electric. Available with Air Agitation Equipment for Clear Ice & Ice Storage Room Equipment. 120 Day Delivery.

### BULK ICE MAKERS

250 to 2000 lb. capacity Electric Motor. Gasoline or Diesel Engine Driven Units. Prompt Delivery.

### ICE PLANT SUPPLIES

Ice Dumpers & Fillers, Brine Agitators, Tank Framing & Covers, Ice Tanks, Coils, Brine Coolers.

Complete Engineering & Manufacturing Facilities

Advise Requirements

(Refrigeration Engineering Corp.)

RECO PRODUCTS DIVISION

2020 NAUBAIN STREET

PHILADELPHIA 46, PA.

## 'I Remember Mama' Contest and Offer of Free Balloons Marks Dealer's Spring Promotion

SYRACUSE, N. Y.—Carmen Supply Co., one of the city's largest appliance dealers, staged a three-day Spring Festival promotion in which the store offered over \$5,000 in prizes, souvenirs, and gifts.

The store went all-out in the promotion of a wide variety of appliances during the event. Factory demonstrations, free roses to the first 100 ladies entering the store on each of the three days, and free balloons for the children were features.

Highlight of the event was the Spring Festival Contest for the best answer to the question, "I Remember Mama Because . . ." The sentence was to be finished in 25 words or less. Entry blanks were available at several locations in the city as well as at the store and the contest was confined to residents of Syracuse and a 26-mile radius.

Entry blanks had to be returned to the store in person. Prizes were awarded from the stage of a Syracuse theater at the close of the con-

test which was tied in with the current movie, "I Remember Mama."

Prizes for the contest in order of award, were: Automatic laundry, refrigerator, gas range, washer, ironer, radio-phonograph combination, two pressure canners, 12 pressure cookers, six electric irons, mixers, toasters, coffee makers, waffle irons, and heat pads.

### McGarity To Open New Store In Monroe, Ga.

MONROE, Ga.—J. L. McGarity has announced plans for opening in the near future a new electrical appliance store in Monroe to be located on Broad St.

McGarity plans to move all heavy electrical appliances from the Firestone store which he operates to the new location, and in addition, to install a model General Electric display kitchen.

## Dealer Association Puts Snyder In Charge Of New Cost Studies

CHICAGO—Richard E. Snyder of Chicago, marketing economist, has been retained by the National Electrical Retailers Association to direct and analyze its 1947 Cost-of-Doing-Business Study, reports C. C. Simpson, managing director of the association.

In addition to his work on the cost study, Nera will also use the services of Snyder as consultant on other business efficiency projects throughout the year.

Snyder is a member of the American Marketing Association and author of a number of special industry reports in the field of marketing economics. He has been active in business research for 15 years. Prior to establishing his own consulting firm, he served for five years as director of research and statistics for the National Door Manufacturers Association, and for three years was

director of economic research for one of the largest private companies in America.

Report forms for the 1947 study have been mailed to all Nera members, and on May 15 Nera expects to release dealer cost information for the full year 1947.

He also indicates that the association has plans to inaugurate a quarterly cost study beginning in July. This survey will be made among a selected group of dealers of varying sales volume, located in different sections of the country. The survey for the year 1947, however, will include cost figures submitted by all Nera members nationwide, the same as in the previous Nera cost survey.

### Joseph Davis, Inc. Is Established In Buffalo

BUFFALO—Joseph Davis Inc., Buffalo air conditioning and refrigeration firm, has been incorporated with capital of \$100,000, according to papers filed in the county clerk's office. Incorporators are Joseph Davis, Margaret E. Davis, Marshall E. Davis, Carl K. Otis, Samuel D. Magavern, and John H. Bryce.

Why more Frigidaire  
serve in more American Homes  
than any other refrigerator

# CONCENTRATION DOES IT!

## FRIGIDAIRE REFRIGERATORS



### Success of Frigidaire Dealers Proves Value of Exclusiveness

Reasons are not hard to find. Frigidaire's full-market-coverage line makes it unnecessary to stock other brands. And dealers recognize all these advantages, that result from selling Frigidaire to the exclusion of all other brands.

Less investment required.

Faster inventory turnover.

Fewer markdowns.

Less showroom and warehouse space.

Simpler showroom display.

Better advertising and sales promotion.

More positive, enthusiastic sales presentations.

Easier sales training.

Easier service training.

Less management attention required.

With Frigidaire Dealers enjoying so many advantages from being exclusive with Frigidaire, is it any wonder they've been able to do such an outstanding selling job that today—More Frigidaires Serve in More American Homes Than Any Other Refrigerator!



You're twice as sure with two great names

**FRIGIDAIRE**  
MADE ONLY BY  
**General Motors**



see your **"DETROIT"**  
**WHOLESALE**  
 for  
**Expansion Valves**  
**Solenoid Valves**  
**Controls**  
**"DETROIT"**

2810

**DETROIT LUBRICATOR COMPANY** General Offices: 5900 TRUMBULL AVENUE  
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Division of AMERICAN RADIATOR & Standard Sanitary CORPORATION  
 Canadian Representatives: RAILWAY AND ENGINEERING SPECIALTIES LIMITED, MONTREAL, TORONTO, WINNIPEG

"Detroit" Heating and Refrigeration Controls • Engine Safety Controls • Float Valves and Oil Burner Accessories  
 "Detroit" Expansion Valves and Refrigeration Accessories • Stationary and Locomotive Lubricators

EXPORT DEPARTMENT—Box 218, Ridgefield, New Jersey

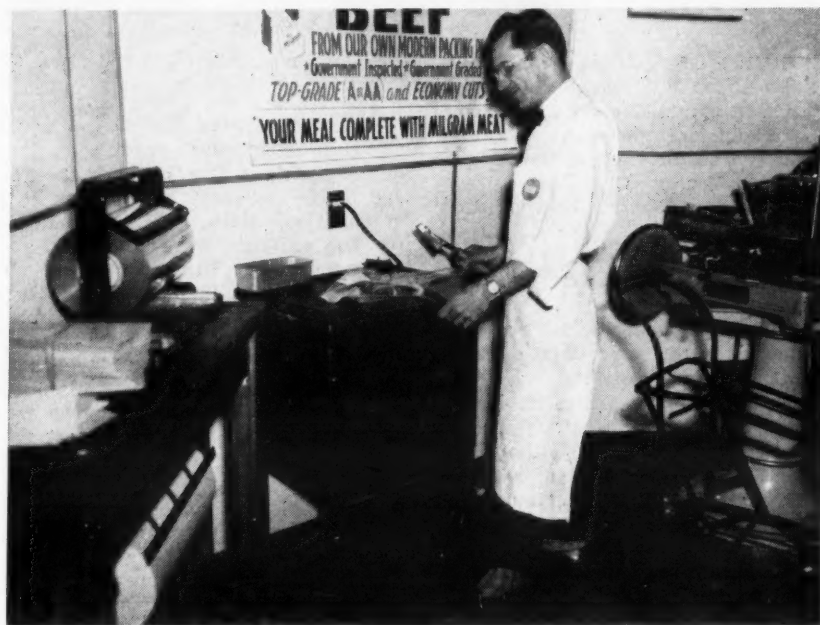
## Local Chain In Kansas City Experiments With New Ideas In Handling Pre-Packaged Meats

KANSAS CITY, Mo.—Pre-packaging of fresh meats in the chain operated by Milgram's here, offers an interesting study of this type of packaging in a typical local organization.

Proceeding cautiously despite the highly favorable indications to date, Milgram's started out with pre-packaging of processed meats only, added a packaged fresh-meat department, but in its experimental stores still operates a service meat counter as an adjunct to self-service. Now the management is ready to predict that self-service will eventually replace butcher service altogether.

Like many other leading chains (Milgram's was the first supermarket operation in Kansas City to set up a store offering 10,500 items under a single roof) the company began dabbling with pre-packaging of luncheon meats and later fresh-cut meats shortly before the war and was completing plans for an all self-service meat market in one of its largest stores when the war came along. Subsequent shortages not only in packaging materials but the meat itself made it impossible to experiment further during the war.

However, Hussmann open-type, self-service refrigerated cases which had worked out well with the cheese pre-packaging were kept ready for a switch to fresh meat self-service operations and immediately after V-J Day Milgram's put its luncheon



Not all of the meat pre-packaging is done in one central location. Milgram's butchers do a certain amount of it on these small table "stations," thus providing flexibility to the operation.

and prepared-meats merchandising program on a 100% pre-packaging basis. Their largest store, at 32nd and Troost Sts., typical of Kansas City midtown residential areas, was selected for the fresh meat pre-packaging test not only because of its large volume of sales, but for the "average customer" reaction.

Luncheon meats—including salami, thuringer, frankfurters, liverwurst, bologna, head cheese, minced ham, sliced ham, Polish sausage, sausage, braunschweiger, veal loaf, and pressed ham—have been successfully pre-packaged for more than a year, as part of the cheese department operations.

### Handling Luncheon Meats

One open-front case and one completely open, non-refrigerated self-service table in the center aisle near the case are used to merchandise all

luncheon and prepared meats—each packaged in cellophane, heat sealed, and provided with a moistureproof waxed paper label wrapped within the package.

Luncheon meats are cut into ¼ lb., ½ lb., 1 lb., and 2-lb. sizes according to the "general demand" which Louis Lieberman, in charge of the department, has tabulated for each variety. Four girls, who also prepare cheese, do the entire cutting and packaging job on a broad pine shelf behind the self-service cases.

Re-stocking is a continuous operation from opening until closing time, the case being refilled an average of three to four times a day by passing the packaged meats over the back of the case to a clerk filling it in from the front.

Milgram's agrees with other experimenters, incidentally, that one piece of equipment seriously needed

(Concluded on next page)

THE MARK OF QUALITY

**Accepted**  
**by the Industry**

Knowing that Weatherhead Packless Valves are chosen consistently by manufacturers, wholesalers and service engineers for rugged service, is your assurance of long, dependable performance, and resulting customer satisfaction.

SAFETY ASSURED THROUGH WEATHERHEAD LABORATORY PRODUCT CONTROL

Look Ahead with  
**THE Weatherhead CO.**  
 CLEVELAND 8, OHIO

PLANTS AT CLEVELAND, OHIO • ANGOLA, INDIANA • COLUMBIA CITY, INDIANA  
 HOUMA, LOUISIANA • ST. THOMAS, ONTARIO, CANADA

**Fogel**  
 REFRIGERATOR COMPANY  
 PHILA. PENNA.

**A 4' PORCELAIN CASE**  
 ... only 43" High

MODEL 4300

**The FOGEL 4' "Lowboy" Double Duty Display Case**

For compact sales-building display, feature this refrigerated counter-height 4' Display Case by FOGEL.

Progressive dealers are tapping a wide market with this space saving double-duty porcelain case. Everywhere groceries, bakeries, taverns, lunchrooms, confectioners, delicatessens, etc., are discovering the great usefulness of the 4' 4300. (Also made in 6' and 8' models, and as a Luncheonette Case with a Bain Marie top.)

This is another example of greater profit opportunity offered dealers representing FOGEL... one of the most complete lines in the industry. Write TODAY for full information concerning dealer opportunities.

**FOGEL REFRIGERATOR COMPANY**  
 5400 EADOM STREET • PHILADELPHIA 37, PA.  
 Quality manufacturers, for almost one-half century, of Display Cases, Reach-Ins, Walk-Ins, and Freezers.



## New Ideas In Handling Pre-Packaged Meats--

(Concluded from preceding page)

to speed up self-service packaged meat turnover is a refrigerated open-front case which can be stocked from the back.

During the year's time that luncheon meats have been sold in this way, the department has thoroughly surveyed operating costs, labor costs, sales results, etc., as a basis for entering the fresh-meat field in the same way. Labor cost and materials cost for packaging the average ½-lb. to 1-lb. slice of luncheon meat has been set at from as little as 1¼ to 2 cents up to 6 cents for large whole sausages or liverwurst links.

As evidence of the success of this operation, sales of luncheon meats are from 45 to 60% higher per week than during the best year previous to the operation and apparently can be increased further, according to the management by addition of more refrigerated display space.

Self-service fresh meats came into the picture at the start of 1947 only as a corollary feature to personal service at the standard meat counter, on which basis Milgram's has felt it possible to work out several problems with the least confusion and with as few mistakes as possible.

### Provides 'After Hours' Service

The combination of service operation with self-service gives the customer an opportunity to contrast for herself the differences between the two. Moreover, as an immediate advantage, it has enabled Milgram's to continue to offer fresh steaks, round steaks, roasts, pork chops, hams, bacon, sausage, hamburger, rib steaks, and other popular meat items to late shoppers after 6 p.m., when union rules demand that member butchers close up shop.

Actually it was this necessity which moved Milgram's to adopt fresh meat on self-service at the outset, since the store's appeal to shoppers was lessened considerably after 6 p.m. when no meat could be purchased.

As an example of how well this operation has worked out, the self-service case averages 100 lbs. per hr. on week days and 200 or more lbs. per hr. on Saturdays—a large percentage of which is sold to late shoppers after 6 p.m.

### Flexible Cutting Schedule

All varieties of fresh meats are packaged by eight butchers, on duty during the slack hours of the day, who do the cutting and one woman employee who handles most of the actual wrapping. Paul Dexter, meat manager, checks the refrigerated cases hourly and determines which meats will be packaged and placed on display next.

While it might be possible to set up a schedule on which to work, Milgram's has found a flexible selection and packaging program works best from a meat-appearance standpoint. Thus almost no meats on display have been in the case for more than two hours.

An exception, of course, is the late afternoon hours when approximately 600 lbs. of fresh meats are packaged to handle both rush evening shopping crowds and late day shoppers who arrive in the market just after 6 o'clock. On Saturdays an average of 2,000 lbs. are packaged and sold on self-service.

While the woman employee handles

the brunt of the packaging at a small table equipped with a label rack, 18-in. cellophane rolls and a hand heat-sealer, every butcher on the counter cuts and packages several times a day, detailed to the specific job by Dexter. From one to three refrigerated open-front cases are used for pre-packaged fresh meats, the number being dependent upon special demand such as Saturday crowds, pre-holiday shopping, and the evening rush. Two are used for the most part, however, with from 200 to 250 lbs. of fresh meat displayed.

Several packaging problems have had to be solved and more remain to be overcome after several months of intensive selling. First the matter of absorbing packaging cost, which after fair consideration has been passed along to the customer. Tabulation of labor cost, packaging materials cost, space chargeable to the meat market, etc., has set a definite cost per meat item which is tacked on to the price.

A small sized steak, for example, may be packaged for 2 cents, large steaks for 3 cents, link sausage 2 cents, pound of hamburger 3 to 4 cents, frankfurters 2 cents, up to

roasts, hams, picnic hams, and other large pieces which are charged out at from 5 to 8 cents.

These are all-inclusive costs, it should be borne in mind. Only in rare exceptions, such as round steak where prices are already a source of complaints, is the charge eliminated.

### No Objection to Prices

The significant and surprising thing is that while it is of course readily obvious to the customer that she is paying a premium for packaging simply through comparing prices detailed on signs along the service counter, there are few objections.

Milgram's feels at present that it is the convenience of the thing rather than the additional eye appeal of pre-packaged meat which seems in the mind of the consumer to justify the higher price.

Among the most difficult of the problems has been the discoloration of fresh-cut meat. The semi-hourly preparation of the packages has done away with this to a large extent and no meats are ever put up for more than one day's requirements. Nevertheless where steak, round steak, liver, and other meat come in direct contact with the type of cellophane being used (MST) a definite discoloration ensues which is likely to



In this Milgram's store, as can be seen from the two types of cases in the back, both pre-packaged and butcher-served meats are available. Tables in the foreground hold hams and some luncheon meats.

cause customer dissatisfaction. Milgram's plans to begin using new specially treated MSAT cellophane, which resist discoloration.

However, due to the extremely rapid turnover of all meats, discoloration is a less important factor now than it would be if meats were kept on sale for more than two days. The heat of hand sealers used to close

the package has also been guilty of discoloration; but this has been eliminated for the most part by the use of paperboard trays or boats under each piece of meat.

Milgram's experienced some difficulty in obtaining bloodproof, waterproof, and easily marked labels before hitting upon the present three-color waxed paper label.

*The*  
**CHAMPION**  
A PRIZE WINNER FOR  
APPEARANCE, PERFORMANCE,  
AND ENDURANCE

**MODEL CH-74**  
(23 CASE CAPACITY)

✓ **Check these New Features:**

ALL STAINLESS STEEL CLAD EXTERIOR (EXCEPT BACK); EASY SLIDE-UP DOORS; AUTOMATIC INNER LIGHTING; REMOVABLE PARTITIONS; REINFORCED STRUCTURE.

Again NATIONAL leads with America's finest cooler. Developed after months of careful research the CHAMPION has proven to be the choice of the most discriminating buyers and users. The CHAMPION model is truly the answer to a demand for a good DRY cooler, with inviting appearance and clean, dependable dispensing.

FOUR POPULAR SIZES

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Write for Illustrated Folder and Price List

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Manufacturers of Stainless Steel and Metal Restaurant Equipment



## YODER PLATE COILS

- NEW STOCK
- MANY SIZES

Quote Below Cost for Immediate Sale

Also 5 new 2 H.P. MILLS  
Water Cooled Compressors

WRITE—WIRE—PHONE

**MIDWEST FIXTURE CO. Inc.**  
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insist on  
genuine

**Marlo**

products

**MARLO-HEAT TRANSFER**  
Since 1925



## INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)

dragging the dead mule up to the undertaker's premises—from down the street where it had died during the night.

So, sensing a huge practical joke, the undertaker went immediately to see his friend, the town's police chief.

"I found a dead jackass in front of my door this morning, and I am told your men delivered it there. What do you want me to do with it?"

Grinning impishly, the Police Chief responded:

"Well, you're an undertaker, aren't you? Why don't you bury it?"

"Yes, that's just the point," the undertaker replied. "That's why I came here. You see, we always must consult with the relatives about the funeral arrangements."

A bald-headed man purchased from his neighborhood druggist a sure-fire hair grower. After using it about three weeks, he rushed into the drug store with the bottle in his hand. Confronting the druggist, he yanked off his hat and pointed to his head.

"Look here," he said, "I've used this stuff for three weeks. Not only is there no more hair on my head than before, but look—look at all those big bumps on my head."

The druggist looked. Sure enough—no hair; but some pretty large

bumps were much in evidence.

Snatching the bottle from his customer's hand, he looked at it in dismay.

"My God," he said, "what an awful mistake. You've been using bust developer."

### Quit Worrying!

There is no imminent prospect of business slackening off in the near future, according to Dr. Charles O. Hardy, Staff Director of the Congressional Joint Committee on the Economic Report.

This conviction he arrives at by analyzing the factors which made possible our present "boom" period—such factors being: (1) backlog of consumer demand for durable goods, (2) large foreign demand for merchandise, (3) wartime increase in purchasing power, (4) willingness of the public to spend freely, and (5) a high level of investment.

"I do not see that any of these factors has spent its force," Dr. Hardy declares. "Nor do I see any new factor working against them. We should not forecast a slump till some cause for such a slump is discerned."

Although farm prices hit something of a snag during February and March, farmer income remained high. Consequently, concerns which cater to the farmer's needs will maintain a well-fortified position. On the other hand, businesses which solicit the city worker's patronage may experience a slight downward trend, Dr. Hardy prognosticates.

Despite the fact that current shifting of a considerable bulk of income from the city worker to the

farmer "may create an illusion of general deficiency of purchasing power, it is really just part of the process of getting from a war to a peace time economy," he avers.

The present abnormally low rent level has resulted in an abnormally high purchasing power for other consumer items, Dr. Hardy observes, in passing. When rents climb back to a higher level, the price or quantity of other articles will be forced down—unless, of course, wages are given another boost.

"It must be noted that while the government is making some gestures in the direction of controlling inflation," he cautions, "the real pressure of public opinion, both inside and outside the government, is toward prevention of a business slump at all costs. Consequently, anti-deflation measures are likely to be applied promptly and vigorously while anti-inflation measures are applied cautiously."

### Salesmen Take the Rap

Today's salesmen are prosperity's orphans. They have suffered from neglect by top management during the period of lush business, according to Arnold Michelson, vice president of the Minneapolis-Honeywell Regulator Co.

During prosperous times, "management concerns itself with all phases of business except the art of salesmanship, so that valuable implement becomes ineffective through disuse," Mr. Michelson avers.

"But let sales volume drop slightly and who gets the call to action?" Mr. Michelson asks, pointedly. "It's not production, nor advertising, nor the

promotion department, but the old reliable sales organization that gets the call.

"What we actually need is a renaissance, a movement for new-fashioned selling that carries force, persuasion and conviction. You can't sell today's products with yesterday's arguments any easier than you can convince a woman that it would be a stroke of genius to dig her pre-war wardrobe out of moth balls and surprise her friends by using it as this spring's outfit."

Mr. Michelson insists that American business "needs 550,000 recruits in its sales army, but it also needs a better understanding of today's problems in the recruiting offices."

### 13 Musts

Salesmen at Barco Co., Kansas City, Mo., are constantly reminded of the "13 musts" in selling technique which every salesman must have to accomplish a thorough selling job. The cartoon sign is placed outside the office of the firm where it is easily seen by floor and sales personnel several times a day. Each of the 13 steps are illustrated with a simple cartoon figure, which, though it may have nothing to do with selling, adds the proper eye-appealing humor to the sign to make it read, according to Ted Penny, manager of the store.

Under the heading of "Thirteen Ways To Be A Better Salesman" are the following steps:

1. Learn to like people—and mean it!
2. Listen—Everyone likes a good listener.
3. Be generous with honest praise.
4. Wear a friendly smile.
5. Talk in terms of *you*, not *I*.
6. Learn to agree before you disagree.
7. Don't argue if you win or lose.
8. When you are wrong, don't be afraid to say so.
9. Try to understand the other fellow's viewpoint.
10. Ask questions that make it easy for the other fellow to say yes.
11. Don't knock. It destroys confidence.
12. Use observation in selling. Don't measure people by your yardstick, but by theirs.
13. Use showmanship in your selling.

Though a salesman is not apt to remember all the points put forth in the sign, if he remembers one only, the sign has more than fulfilled its usefulness, according to the manager.

### Monsanto Has Fun

The labyrinthine Monsanto Chemical Co. is one of the industrial marvels of our age. Its almost miraculous growth is a tribute to the resiliency of the beset-upon American System.

Not the least of its attributes is the coterie of bright young men with a sense of humor which it has attracted. As an illustration, we reproduce the following from a pamphlet

mailed to advertising men by Howard Marple, Monsanto's advertising manager:

The scene is the Advertising Manager's office. A desk, set at an angle to denote executive status, is in mid stage. Behind the desk is a 5-foot stack of past deadline advertisements awaiting approval. A carafe of Peptobismol and a cigar box full of aspirin is on the desk. Outside the window are perched two buzzards licking their dry lips waiting for the A.M. to miss his footing.

As the scene opens the final unit of a 755 page easel presentation is being made by Hy Pertension, of "Handle Bar & Sprocket." The easel board lights up like a tilted pin ball machine. Roman candles are discharged, and a lady midget in tights, waving a copy of "Handle Bar & Sprocket" in one hand and space contract in the other steps out and crawls up on the A.M.'s lap.

At this juncture the A.M. shoots both Hy Pertension and the midget and rings for his secretary.

The Advertising Manager's secretary (weight 220), her headguard slightly awry, appears, speaks!

"Mr. Murphy of the 'Murphy Bed Makers Monthly' awaits without."

"Without what? . . ."

"Without an advertising contract!" (This grim routine is repeated eight times daily for morale purposes.)

"How long has he been waiting?"

"Only since October . . ."

"Put him back in his tent and send somebody in who's been out there since February. How about the young fellow from 'Wire & Winches'?"

"He has retired. His grandson has taken over the waiting . . . but had to go down to 135th on our list."

"How about P. R. Sistest of 'Glue Makers' Gazette'? He's been sticking around since last Christmas . . ."

"Has he seen the agency media director?"

"Check!"

"Has he seen our sales manager in San Diego?"

"Check!"

"Karachi, India?"

"Check!"

"Well, I suppose I'll have to see him . . . here, Toots, reload this revolver, wilya?"

### The Birds and the Bees

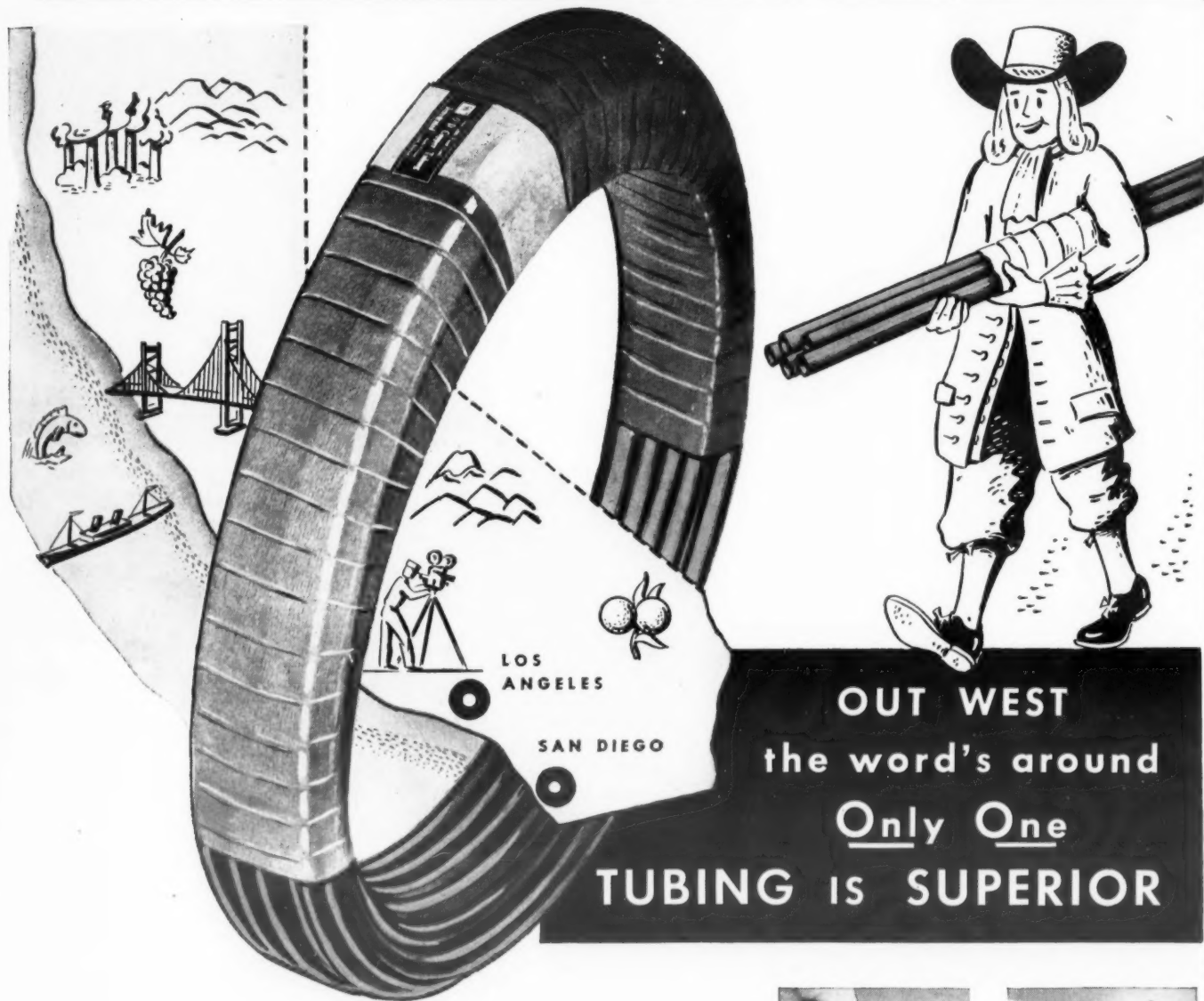
Shortly after a souped-up 40-to-1 "shot" rode home to victory on a local track, a cub newspaper reporter interviewed the jockey who had ridden the winning horse.

"Tell me, how did you do it?" he asked, worshipfully.

The disdainful jockey leaned over confidentially.

"You know," he whispered, "it's because I kept repeating a little poem to that smart old nag: 'Roses are red, violets are blue, horses that lose are made into glue.'"

And the cub reporter was awfully sore when the sports editor didn't see fit to print his exclusive "scoop."



LOS ANGELES  
SAN DIEGO

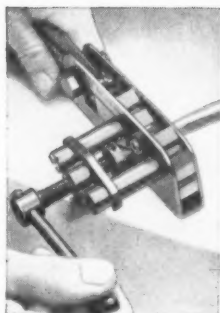
**OUT WEST**  
the word's around  
**Only One**  
**TUBING IS SUPERIOR**

Up and down the Pacific coast, the pass word for fine tubing is 'Superior'.

Jobbers and industrialists in the West are showing the same enthusiasm for 'Superior' tubing that it has received throughout the country. Its countless advantages are convincing more and more manufacturers that 'Superior' is the right tubing for trouble free installations. Available in straight lengths or coils, 1" O. D. to capillary .093" O. D.

For a really dry, clean and bright, easy bending and seamless tube, turn to 'Superior'. Give us the word—call, write or wire today.

PENN TUBING IS "SUPERIOR"



FLARING TOOL



CUTTING TOOL

The Papco #400 Flaring Tool proved such an advancement in its field, there was a demand for a cutting tool of the same superior quality. The result is the revolutionary Papco #500 Cutting Tool. Modernize—order Papco today. Write for literature on tube tool kit.

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ERIE, PENNSYLVANIA  
Phone 35-111

## We Will Sacrifice Our Complete Stock OF KRAMER-TRENTON THERMOBANKS All New and Unused

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TV-75	\$ 86.94
TV-103	107.64
Combination #07	149.35
Combination #1	168.66

ALL SALES F.O.B. NEW JERSEY

ALL ORDERS SUBJECT TO PRIOR SALE

SEND ORDERS AND CHECKS TO BOX NO. 2772

AIR CONDITIONING & REFRIGERATION NEWS



## Frozen Food Locker Sizes To 100 cu. ft. Okay In N.Y. State

ROCHESTER, N. Y.—Delegates to the annual meeting of the New York State Association of Refrigerated Warehouses here hailed a new state law permitting storage of perishable foods for a maximum of 24 months instead of the 12-month period.

The law also increased the maximum size for a frozen food locker from 12 cu. ft. to 100.

H. C. Diehl, director and secretary of the Refrigeration Research Foundation of Berkeley, Calif., told the convention that the increase in the number of home freezers will stimulate rather than retard the cold storage industry.

Garth A. Shoemaker of Elmira, chairman of the conference, announced that a meeting of the Northeastern Fruit Storage Training Conference would be held in Rochester June 2-5. It will be jointly sponsored by the Refrigeration Research Foundation and the Refrigerated Warehousing Associations of the Northeastern United States.

## Ft. Wayne Appliance Sales Off In January

FORT WAYNE, Ind.—According to the current appliance market report just released by the Indiana Service Corp. representing more than 35% of the leading appliance dealers in Fort Wayne reporting, January sales were down about 50% in most items as compared with November sales (it was not stated why the comparison was made with November and not December).

Examples: electric ranges—November, 84 units, January, 27 units; electric refrigerators—November, 108, January, 74; washers—November, standard 52, automatic 38, January, standard 67, automatic 17; electric irons—November 93, January 53.

## Films and Demonstration Plans Mark Hotpoint Water Heater Campaign

CHICAGO—A new seven-point electric water heater promotion campaign based on closer dealer and distributor cooperation has been launched by Hotpoint Inc.

The new water heater campaign embraces market studies, dealer and distributor cooperation, utilities support, advertising, sales promotion, sales training, and dealer presentation. Details of the campaign, including specification sheets, display samples, and advertising copy are contained in a 100-page manual.

The manual emphasizes "selling through rather than to" the dealer and devotes special sections to step-by-step outlines for dealers to use when selling consumers, sound slide film training programs featuring the water heater product story, and instructions for demonstrating the "Magic Circle" heating principle of the external pressurized heating

bands.

More than 1,000,000 electric water heaters were sold in 1947, compared with 488,000 in 1946, the manual points out, adding that "the full scope of the future market is just now coming into view." A recent electric utility survey reveals that the potential electric water heater market for the next five years is approximately 5,000,000 units.

Edward R. Taylor, Hotpoint's manager of merchandising, described the campaign as a "test run" for selling effectiveness, adding that upon its completion a continuing program embracing all merchandising aids would be undertaken.

## Fedders-Quigan Pays Quarterly Dividend

BUFFALO—Directors of the Fedders-Quigan Corp. have declared a quarterly dividend of 20 cents a share, payable April 30 to stockholders of record April 19. A similar amount was paid in January.

The company also announced that Edward O. McDonnell of New York has been elected a director.

## Elliott-Lewis Co. Merger Signals Plan For New Quarters For Firm Serving 3,000 Dealers

PHILADELPHIA—The merger of the Elliott-Lewis Co., Inc., and the Elliott-Lewis Electrical Co., Inc., into one of the country's largest distributing firms in the field of home appliances, heating, and air conditioning has been announced here.

The new firm is the Elliott-Lewis Corp. with headquarters at 2514 N. Broad St. in Philadelphia.

It was formed, said J. E. Rowland, formerly president of the Elliott-Lewis Co., Inc., and now president of the new organization, so that dealers and consumers of both component firms could be better served by having a larger number of their needs provided by one firm.

The new corporation has more than 3,000 dealers in an operating area comprised of the eastern half of Pennsylvania, the southern half of New Jersey, Delaware, and the eastern shore of Maryland.

Architects are drawing up tentative plans now for a new building. It is to have a minimum of 150,000

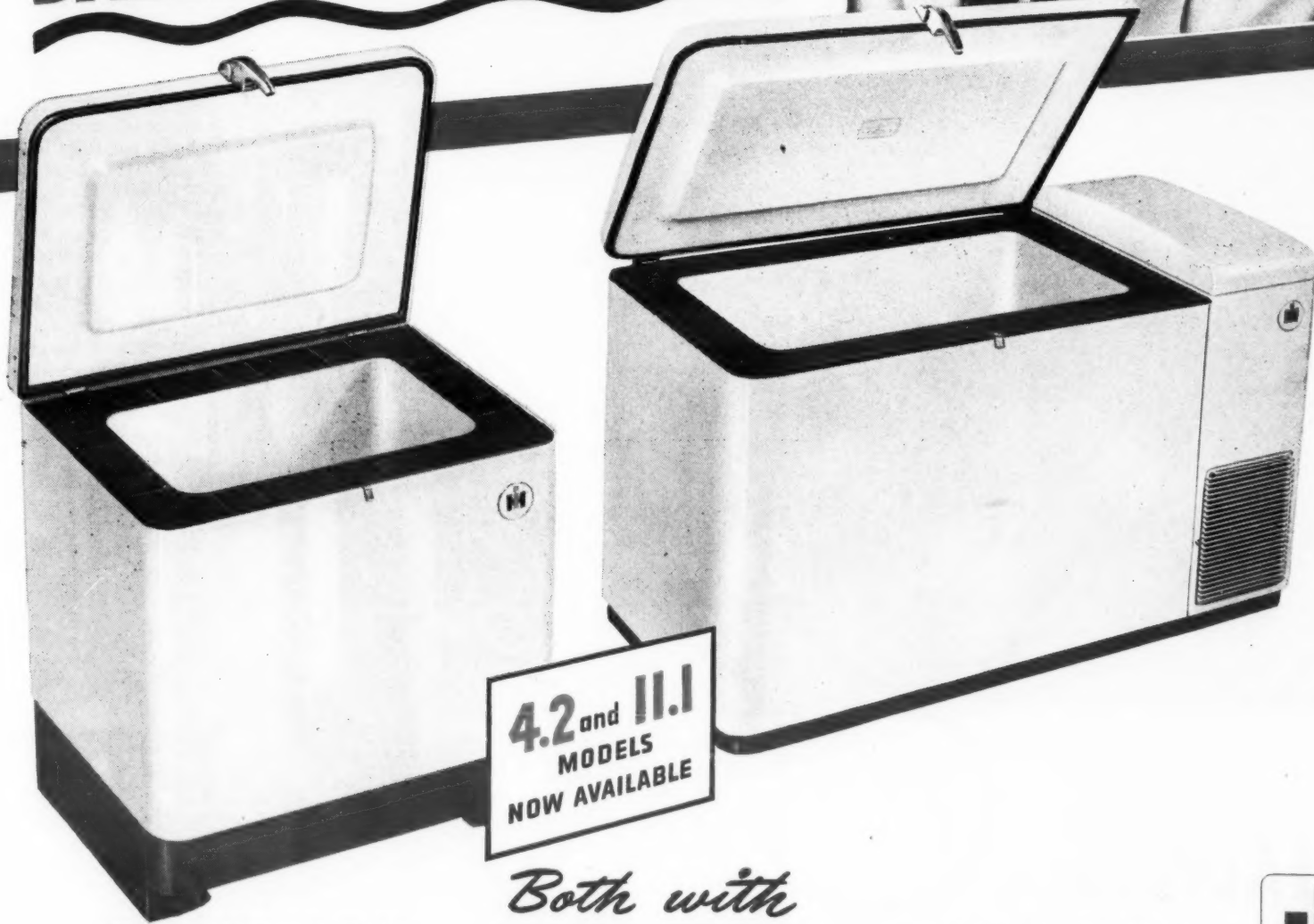
sq. ft. of floor space, railroad sidings, as well as platforms for loading vehicles.

The site, to be in Philadelphia, has not been selected yet, according to the announcement.

Among the firms for whom Elliott-Lewis Corp. is sales representative in its four-state area are York Corp., International Harvester, Delco Heat Division of General Motors, Coleman Co., Stromberg-Carlson, General Electric Industrial Corp., and the F. C. Russell Co.

T. H. Lewis will be board chairman of the new corporation. In addition to Rowland, who is general manager as well as president, other officers are Vice Presidents Frank Elliott, Jr., assistant general manager; Victor Lazo, in charge of wholesale operations; J. C. Campbell, in charge of retail operations; Joseph Call, in charge of refrigeration and air conditioning; and Warren Muir. A. M. Morton is treasurer and Otto L. Draeger, secretary.

## TWO BEAUTIFUL, NEW INTERNATIONAL HARVESTER FREEZERS *with* SALES-ABILITY PLUS!



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**FROST-LOK...VAC-U-SEAL...TIGHT-WAD**  
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Customers who come in "just to look" remain to buy, captivated by the smooth, modern lines of IH Freezers... their sturdy, all-steel construction... the silent, efficient, hermetically-sealed TIGHT-WAD unit... the assurance of top freezer performance they see in FROST-LOK and VAC-U-SEAL and other outstanding Harvester features.

The many refinements of freezer design are apparent. The big, floating lid that opens as if by magic with the touch of a finger; the full, un-

obstructed view of the snow-white interior; the recessed base providing comfortable toe-space, enameled black not to show soil... those are points women, especially, appreciate at a glance. So are the handsome, chrome-plated handle, positive latch, and convenient spaces for placing packages of food while putting them away or removing them.

Is it any wonder, with sales-winning features like these... backed by a 5-year condensing unit warranty and the International Harvester name... that IH Refrigeration dealers are making remarkable sales records? This evidence of SALES-Ability spells dealer security for the buyers' market ahead!

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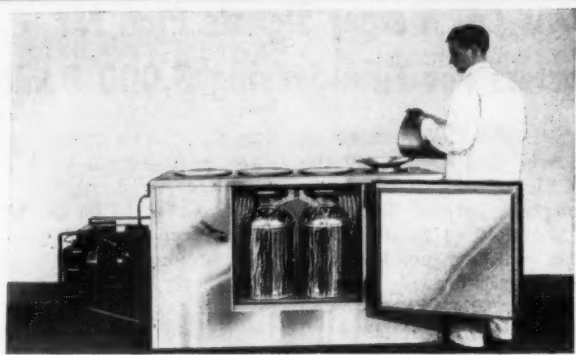
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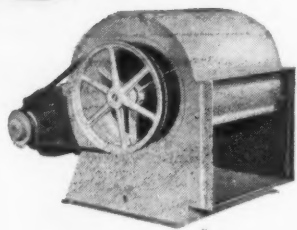
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## West Appointed Regional Sales Chief for Typhoon

BROOKLYN — Robert West has been appointed regional sales director for the midwestern area by Typhoon Air Conditioning Co., Inc., reports Don V. Petrone, sales manager.



Robert West  
Iowa, Wisconsin, and Minnesota.

## Bristol Co. Conducts 2-Week Industrial Instrument Courses

WATERBURY, Conn.—The Bristol Co. here, manufacturer of automatic controlling, recording, and indicating instruments for industrial applications, is conducting a series of courses for plant instrument and operating men in the Theory and Application of Industrial Instruments.

Each course consists of two weeks of intensive lectures and laboratory work, with special emphasis on instrument maintenance and repair. Subjects covered include instruments for pressure, temperature, relative humidity, flow, pH, and electrical measurements; pyrometry; pneumatic, electric, and electronic control systems, and telemetering.

## Increasing Market for Heat Powered Air Conditioners Seen by Berry in ASRE Talk

Dr. N. E. Berry (third from left), speaker and Servel director of research, is being congratulated by Thos. Shotton, chairman; A. C. Crawford, program chairman; and L. Bert Nye, of the Washington Gas Light Co.



WASHINGTON, D. C. — "Where there is a market preference for heat powered air conditioning units, it may in one case be based on lower operating cost, in another on availability of power, in another on better service facilities, in still another on the features of quietness, less maintenance and longer life, and eventually perhaps it may be based on lower initial cost," declared Dr. N. E. Berry in discussing the possibilities of heat powered systems, particularly those designed for small commercial or residential units, before the April meeting of the Washington-Baltimore section of the ASRE.

Dr. Berry is a member of several national engineering organizations: The American Chemical Society, American Society of Heating and Ventilating Engineers, National Association of Corrosion Engineers, and the American Society of Refrigerating Engineers.

"Air conditioning in general is still an infant industry and heat powered air conditioning—particularly as applied to small commercial and residential installations—is in many respects the youngest infant of this group," said the speaker. "But infants have a habit of growing up—sometimes right under our noses—without our fully realizing it. I think perhaps this has happened to some extent in the case of heat powered air conditioning. It may then be worth while at this time to stand off a bit and take a 'new look' at this baby."

Dr. Berry, after receiving his doctorate in physical chemistry from the University of California, was engaged in research work at Frigidaire in solid absorbent refrigeration which subsequently resulted in the Faraday machine. Following this first connection with the refrigeration industry his wide experience has included research work at General Foods Corp., Allied Chemical & Dye Corp., and Servel, Inc.

From this experience he drew comparisons between the present status of these systems and their status at the time of the country's entry into the war when Bryant, Surface Combustion, Williams, Mills, Servel, and perhaps others were en-

gaged in research and development on medium sized gas and steam operated units.

"Today," Dr. Berry told his audience of 180 engineers, "Servel is in full-scale production on gas fired units for residential applications; Surface Combustion has a 5-ton unit designed for this purpose but are not yet in volume production, and Williams is definitely planning the production of a 10-ton packaged chilled water unit."

The technical aspects of the several heat powered units were discussed and the great progress that has been made was demonstrated by comparisons between present-day designs and the comparable designs at the start of the war.

The advantages of heat powered units were presented. They included availability of power whether it be gas, waste steam, distributed steam, or steam from low-pressure coal and oil-fired boilers; low operating cost in many areas; the relative ease of application of re-heat when needed; adaptability to all-year operation, the only comparable possibility with electrical energy being the use of the heat pump; and the relative ease of application of modulated or step control.

"I would like to offer one or two conservative predictions," Dr. Berry said. "One of these, I feel certain, is that there will always be a market for heat powered air conditioners, and possibly this market may one day exceed that for compressor units. And the cost of heat powered air conditioners (relative to the rest of our economy) will come down considerably and probably continuously while the quality of performance is being improved."

This reduction in unit cost, according to Dr. Berry, will be brought about by increased volume and better production methods, by still more careful design, and by continuous research and development resulting in numerous minor and a few major improvements in design. Though Dr. Berry admitted that the same could probably be said for compressor units, he said he believed the possibilities were greater for heat powered units.

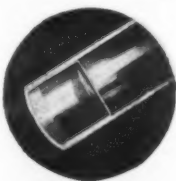


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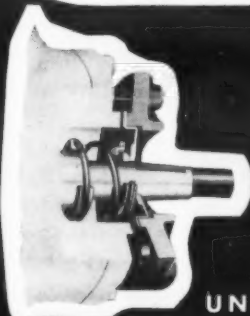
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## Health Factor May Broaden Educational Requirements for Air Control Engineers

MINNEAPOLIS — The heating, ventilating, and air conditioning field has advanced to a new field—climate control aimed at providing a healthful environment—which is rapidly changing the scope and nature of air control engineering.

This was the assertion made by G. L. Tuve, professor of mechanical engineering, Case School of Applied Science, Cleveland, Ohio, and president of the American Society of Heating and Ventilating Engineers, in a talk given here to members of the Minnesota chapter of ASHVE. His address was entitled "Air Control—1960."

Heating and ventilating engineers must now concern themselves with a host of other fields outside of the mere production and installation of equipment, Prof. Tuve said. These fields include acoustics, accounting, metabolism, hygiene, fuel conservation, and preparation of building codes.

Indicative of the new trend is the necessity of broadening the educational training of heating and ventilating engineers. He predicted that other engineering schools will soon follow the example of the University of Minnesota which is one of the first three major schools to make engineering a five year curriculum instead of the usual four.

"Some day ASHVE might have to change its name to the 'Institute of Planet Control,'" he said. "For even now our professional service seeks to provide economically a healthful indoor climate with equipment that takes care of itself."

But climate control engineering covers an extremely wide field, making it necessary for heating and ven-

tilating engineers to be familiar with fluid mechanics, thermodynamics, heat transfer, automatic control, psychrometrics, combustion, acoustics, physics, accounting, metabolism, electronics, and hygiene, the speaker said.

In addition, engineers must also take a greater active interest in preparation of building codes, smoke control, safety and health ordinances, and fuel conservation, he stated.

Prof. Tuve pointed out that even now the society is investigating the effects of thermal shock upon humans as key to greater comfort and health.

"It must be remembered, however, that it is not known today whether the term 'health' and 'comfort' are synonymous," he added. He suggested that the Minneapolis proposed new medical center would be an ideal place to check the effects of comfort and environment on health.

## Tynan Heads Sales of Raytheon Div.; Curtis Named Product Mgr.

WALTHAM, Mass.—Ray C. Ellis, vice president of Raytheon Mfg. Co. here, has announced the appointment of James J. Tynan as sales manager of the Commercial Products Division.

Kenneth V. Curtis has been named product manager. William A. Gray continues in his present capacity as assistant sales manager.

Tynan was formerly in charge of sales and service of the Mariners Pathfinder radar, heretofore distributed by Raytheon's marine affiliate, Submarine Signal Co. This activity is now transferred to the Commercial Products Division.

In addition to radar, Raytheon's Commercial Products Division embraces electronic dust precipitators; AM, FM, and television broadcasting equipment; voltage stabilizers, rectifiers, rectifiers, resistance welding controls, and other electronic and electrical products.

## Group Asks Curb on Black Market Sheet Iron Sales

ROCHESTER, N. Y.—The New York State Sheet Metal Roofing and Air Conditioning Contractors' Association wants federal action to curb black market sales in sheet iron.

The group made the request in a resolution adopted at the closing session of its 25th anniversary convention. Another resolution asked a curb on export of galvanized sheet iron to raise domestic supply.

More than 250 contractors attended a three-day convention here.

Joseph R. Stiglemeier of Buffalo, who was re-elected president of the association, said the cooperative efforts of the association members have made possible more efficient installations of equipment.

## NFFLA Retains Ex-Legion Head

WASHINGTON, D. C.—Paul Griffith, past commander of the American Legion, has been retained as Washington representative for the National Frozen Food Locker Association.

## Davison Manages Ebco Chicago Sales Office

COLUMBUS, Ohio—Ebco Mfg. Co., manufacturer of electric water coolers, has named S. M. Davison, veteran electrical sales executive, as district sales manager with headquarters in Chicago.

Davison has been with the Westinghouse Electric Corp. for over 16 years, the last seven and a half of them as northwest district manager, Electric Appliance Division, with headquarters in Chicago.

In his new position, Davison will have supervision in Illinois, Indiana, and Wisconsin over sales of the Ebco company's own Oasis line of water coolers. He also will be in charge of sales of the Ebco-made Kelvinator-refrigerated coolers throughout this territory.



S. M. Davison



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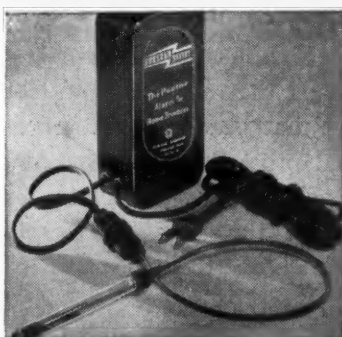
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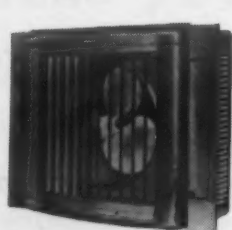
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## Another Roosevelt Legacy

THE Supreme Court of the United States has done our labor unions a terrible disservice in vesting the latter with too much power, and too many opportunities to go wrong in a big way.

And our nation's legislators will be compounding that felony if they fail to establish appropriate controls over that power—even above and beyond the Taft-Hartley Act (which is just a hesitant, tentative, compromising “pass” at the fundamental problem).

Unless more is done to make union bosses realize that they are just common, ordinary citizens like the rest of us, rather than above-the-law barons, it's obvious that the grapes of wrath will ferment until the whole union-labor keg blows up. And the wine that spills may be bitter to the taste of the vintners.

Let's take a glance at the subject of picketing.

In a Wisconsin case, a bare majority of the Supreme Court held that it could not deny a state's power to make picketing “a permissible form of communication” even when picketing comprised mass assault and battery. A Supreme Court minority believed, however, that Wisconsin no more had the power to legalize destructive picketing than it would have had to pass a law legalizing libel, theft, mayhem, or murder.

Conscientious legal minds are astonished that our Supreme Court, in 1940, decided (Thornhill vs. Alabama) that peaceful picketing is a “form of speech” entitled to constitutional protection, and that under the Fourteenth Amendment no state legislature could prohibit mass picketing or mass violence parading under the guise of picketing, because such a statute would be a “denial of freedom of speech.”

Even “peaceful” picketing is a type of coercion—and it is intended as such by its users. Certainly it is a power which should have its wings clipped in the interests of all the people. Questions-in-point:

How about prospective customers who decide not to enter a picketed store? Are they persuaded to go elsewhere by the merits of the union's cause (assuming that they even know what the cause is, let alone its merits) or are they intimidated by verbal abuse? And what about property owners who might give work to deserving non-union artisans, but who decide reluctantly that they're better off to deal with union contractors in order to avoid having their premises picketed or wrecked?

Those are good questions. How can any realistic member of the U. S. Supreme Court answer them conscientiously and still say that mass picketing and violence is O.K.?

If free speech can be defined as the uncensored dissemination of unbiased information, where does that leave the union pickets and their spitemongering, hateful placards? Those cards-of-calumny are anything but unbiased. And “free speech” is about as remote from libelous profanity and lawless bodily assault as Boris Karloff is from Shirley Temple.

If you or I stood at a bus stop and slugged anyone who tried to board a bus, we'd be jailed. But labor union pickets can do that sort of thing with impunity. And the Supreme Court upholds them. Obviously, that's a “double standard” for America—one law for union members, and another for ordinary standards.

If our courts continue to uphold the double standard in their judgments on labor cases, inevitably we must expect that other organized pressure groups will make it their business to influence the election and appointment of legislators and judges who are willing to apply the “double standard” to other matters. And that sort of thing would place all mutual endeavors, including labor unionism, under a party-line thumb.

If and when that happens, it won't be Democracy, brother.



## Stars Appearing In Appliance Store Help Boost Dealer's Volume Sky-High



invited San Franciscans to be on hand.

Some of the headliners who have already appeared at Ferrara's are Tito Guizar, Eddy Garr, the Pied Pipers, Elena Zelayeta (noted San Francisco restaurateur), Miquelito Valdes, and Stan Kenton.

Russell Byrd, master of ceremonies at the Trocadero, is pressed into service on these occasions and keeps the audience in a good humor

LEFT: Advertisement ties-in with visit of Jerry Colonna.

throughout the entire performance. Every appliance line handled by the store, all nationally advertised brands, are promoted during these shows.

"Our shows are pretty well mixed up," Millard explained. "We try to present an outstanding professional personality and, along with him, top notch demonstrators for the local



At one of the sessions where noted home economists are the attraction.

electrical or gas utility, who put on a show of their own.

"Afterwards, we serve whatever food has been prepared, invite the people to ask all the questions they want about the appliances on display, and to buy anything they feel like purchasing."

Due to the heavy congestion of

people in the store, it isn't possible for salesmen to get to many of the prospects, but salesmen can and do list up prospects for later outside calls or store demonstrations, Millard said.

Does this idea pay off? Ferrara and Millard think so. The store did a \$750,000 sales volume during 1947.

## 2 Get Posts with Philco Distributors N.Y. Branch

NEW YORK CITY—Appointments of J. J. Harris, with Philco for 16 years, to the position of general manager of the New York branch of Philco Distributors, Inc., and of W. T. Donnelly as general sales manager, have been announced by H. R. Sheer, vice president and general manager in charge of branches.

Harris joined Philco's New York branch as a salesman in 1932. In 1941, he was commissioned a Captain in the U. S. Army Ordnance Corps. Discharged from the Army in 1945, he returned to Philco-New York as sales manager, New York Division. Since last December he has been general sales manager of the New York branch.

Donnelly joined Philco-New York in 1935 as a salesman, and continued to serve in that capacity until 1942 when he joined the U. S. Navy. After serving three years as Chief Petty Officer in the South Pacific, he resumed his field sales work with Philco in 1945.

SAN FRANCISCO—Having Jerry Colonna, Jimmy Savo, Walter Pidgeon, or some other nationally-known celebrity put in an appearance at your appliance store is one swell way to sell major appliances, according to William Millard, general manager of Joe Ferrara's American Home Appliance Store here.

As many as 1,000 persons have crowded into Ferrara's on a Thursday evening to watch top-notch entertainers make recordings and, incidentally to witness appliance demonstrations by experts from the local gas and electric utility.

Joe Ferrara, it must be admitted, has a slight edge on his competitors in offering this kind of entertainment to his prospects. It so happens that he is also owner of the Trocadero night club, which is located right next to the appliance shop.

Ferrara got the idea for these evening sessions from a habit acquired by stars appearing in the night club of dropping into the appliance shop in between their shows to listen to themselves on wire recorders.

A few customers happened to be on hand at one such occasion. They liked the idea so well that Ferrara and Millard arranged to repeat it. Not only that, they based their newspaper advertising around the stars who would appear in the store and

*When the customer starts  
to argue with herself*

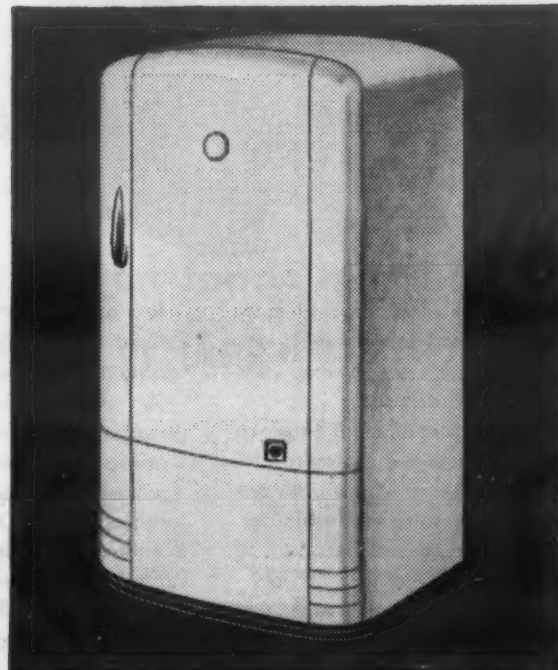
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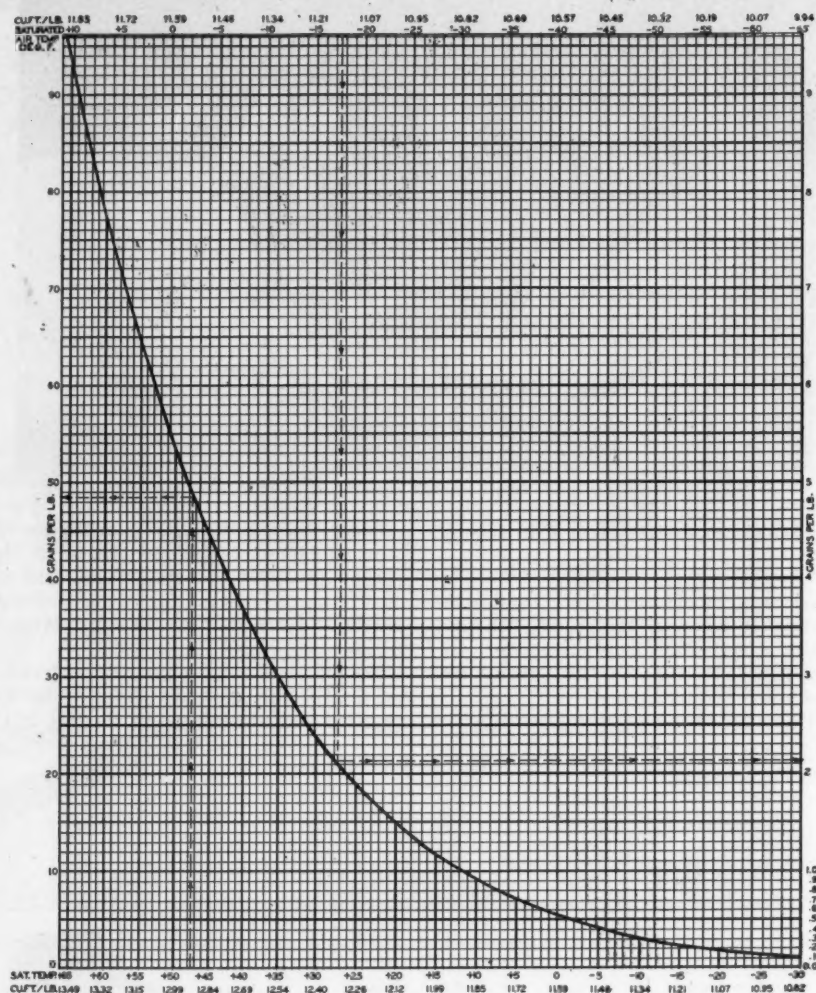
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Fig. 1. Moisture Carrying Capacity of Air at Low Temps.



Low temperatures, maintained with small variation as the cold air passes over the foods, minimize dehydration during the freezing process.

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## Quick-Freezing with Cold Air

### Part 1 of an Article Explaining Principles and Practices In Cold-Air Freezing of Foods

By Terry Mitchell, M.E., Frick Co., Waynesboro, Pa.

The freezing of foods with cold air has had a slow growth. Things frozen in still air at temperatures of zero and above did not hold up well, unless they were packed in a sugar syrup or were glazed. Inventors turned to other means, and patented all kinds of special systems using brine sprays or fog, cold plates, metal belts, floating pans, and other devices. Some of these have been highly perfected and are still doing good service. However, the majority of the foods frozen today are handled simply with a blast of very cold air.

Cold-air freezers need no tricky devices, and no brine or sugar solutions have to be maintained. The equipment is simple and durable. Banks of pipe coils are installed in a bunker, either above or at the side of the space to be cooled.

The temperature is dropped to 30 or more degrees below 0° F. Fans keep the cold air in rapid motion over the coils and the foods, which can be handled either on push trucks or conveyors, or both. The products can be frozen in the packages which go direct to the trade, or they can be loose frozen for packaging after the rush season is over.

The curve showing the moisture-carrying capacity of air at low temperatures makes it plain why the air should be kept so cold. This particular curve was drawn with two sets of ordinates; those at the top and right-hand side are to a fine scale,

and permit very accurate readings.

If we take air leaving the cooling coils of a freezer at -35° and its temperature rises 5° in passing over the foods, its moisture-carrying capacity is increased less than three tenths of one grain in over 10½ cu. ft.

If the initial temperature is -60° F., the ability to pick up moisture, when warmed 5° as before, is only ½ of one grain per pound of air!

When we remember that there are 437.5 grains in a single ounce, we see why a blast of very cold air, in a well designed freezer, has a negligible drying effect on the foods.

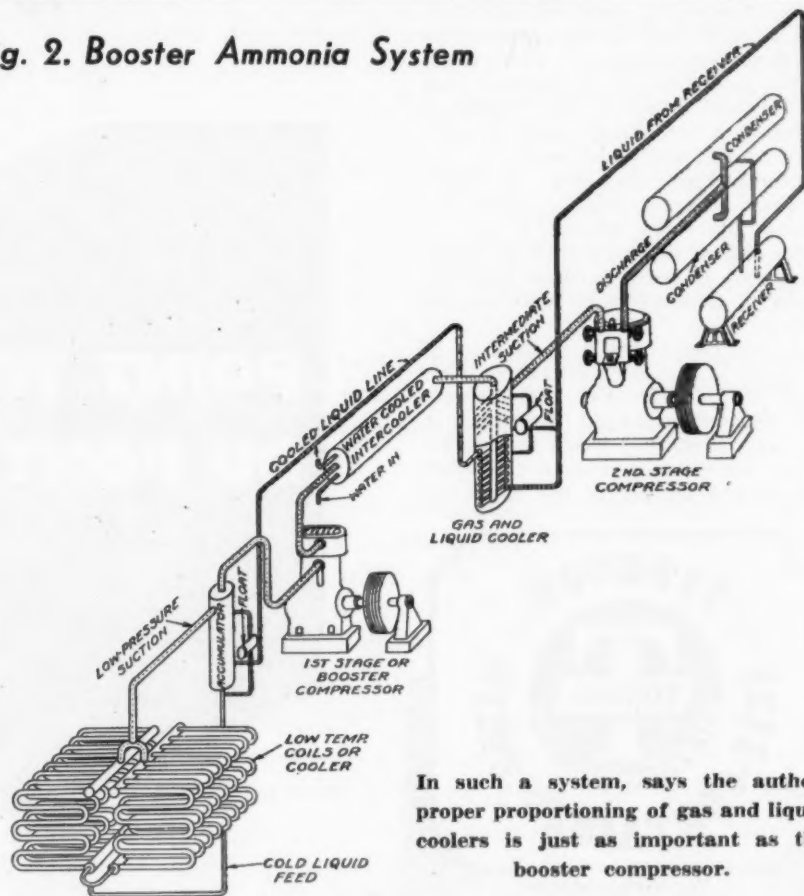
In a test run made at the plant of the Jerpe Commission Co., at Omaha, 43,924 pounds of grade-A tom turkeys, each loosely wrapped in a single sheet of waxed paper tied with one loop of string, were exposed in uncovered fibre boxes for nine hours to an air blast varying in temperature from -30° to 36° F. The air was warmed an average of 6.5° in passing over the birds. The total loss in weight averaged only 0.334%.

It is probable that the turkeys would have lost more than a third of 1% by shrinkage if they had stood in the warm air of the usual room for a similar period.

The booster ammonia system, shown in Fig. 2, provides these low temperatures with economy. Where the compression ratio is around

(Continued on next page)

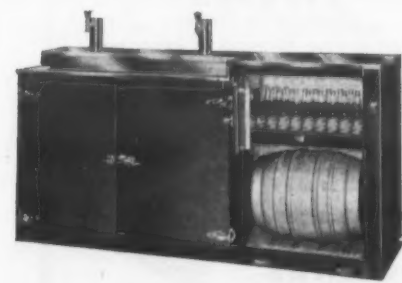
Fig. 2. Booster Ammonia System



In such a system, says the author, proper proportioning of gas and liquid coolers is just as important as the booster compressor.

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Table 1—Properties of Low-Temperature Refrigerants

	Melting Point Deg. F.	Pressure for -100° F.	Critical Points Pressure Gauge	Temp. Deg. F.
Ammonia	-107.86	27.4 in. vacuum	1,651	271.2
"Freon-12"	-252.7	27.01 in. vacuum	567	232.7
"Freon-22"	-256.0	25.06 in. vacuum	701	204.8
Ethane	-278.0	16 lb. approx. gauge	718	89.8
Ethylene	-272.0	50 lb. approx. gauge	749	49.5
Propane	-309.8		632	201.1
CO <sub>2</sub>	-69.9	72 lb. gauge	1,070	87.8

Table 2

Tables Showing Approximate Volume of Various Refrigerants Which Must Be Handled Per Minute in First Stage to Produce Low Temperatures

Suction Temp.	Ammonia Cu. Ft. Per Ton	No. of Stages	"Freon-22" Cu. Ft. Per Ton	No. of Stages	"Freon-12" Cu. Ft. Per Ton	No. of Stages
-100			40.4	3		
-90			29.0	3	48.4	3
-80	31.2	3	22.5	2	37.6	2
-70	21.7	3	16.85	2	28.2	2
-60	15.9	3	12.76	2	21.35	2
-50	12.51	2	9.82	2	18.20	2
-40	9.4	2	7.76	2	13.00	2
-30	7.2	2	6.26	2	10.30	2
-20	5.6	2	5.04	2	8.30	2
-10	4.4	2	5.21	1	6.69	2
0	3.5	2	4.19	1	6.82	1

Table 3

Comparison of Two-Stage Refrigerating Systems; All at -40° F. Saturated Evaporator Temperature

	Ammonia	"Freon-12"	"Freon-22"
Evaporator Pressure, Absolute	10.41 lb.	9.32 lb.	15.309 lb.
Temperature, Suction to Booster	-30°	-30°	-30°
Superheat in Suction Gas	10°	10°	10°
Intermediate Pressure, Absolute	45.7 lb.	34 lb.	55.4 lb.
Intermediate Temperature, Saturated	18.0°	18.0°	17.5°
Temperature, Suction to Main Compressor	28.0°	28.0°	27.5°
Superheat Suction to Main Compressor	10°	10°	10°
Condenser Pressure, Absolute	200 lb.	124.5 lb.	200 lb.
Condenser Saturation Temperature	96°	96°	96°
Gross CFM/TR, 1st Stage	15.23	20.85	11.7
BHP/TR 1st Stage	1.409	1.375	1.310
Temperature Liquid to Expansion Valve	40°	40°	40°
CFM/TR, 2nd Stage	3.385	6.4	3.94
BHP/TR, 2nd Stage	1.34	1.535	1.6
Vol. Eq., 1 Stage	65%	67½%	72%
Vol. Eff., 2nd Stage	80%	73%	75%

## Freezing Foods with Very Cold Air--

(Continued from preceding page)

8 to 1 or more, it usually pays to install a two-stage system. This may effect power savings of 15 to 30%. Two, three, or even four stages can be arranged.

Note the use of float control valves which generally have electric shut-off valves ahead of them, and the method by which the liquid ammonia is also cooled in stages. In such a system the proper proportioning of the gas and liquid coolers is just as important as the booster compressor itself.

Table 1 gives the properties of low-temperature refrigerants. Table 2 lists the approximate volumes of ammonia, "Freon-12," and "Freon-22" that must be handled per minute in the first-stage machine.

Table 3 is a comparison of two-stage refrigerating systems, all at a

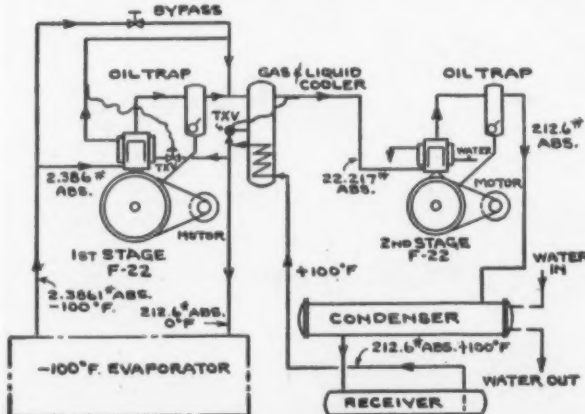
saturated evaporator temperature of -40° F.

Thus far, the degree of cold used in quick-freezing work is within the range most easily obtained with ammonia. If the temperature is to be -60° or colder, three stages should be used. The tendency is to use colder and colder air. Ammonia is not very suitable, even with three stages, for maintaining temperatures below -80° F.

"Freon-22" gets the preference in the still lower ranges. Fig. 3 gives the operating conditions in a two-stage system using "Freon-22" with an evaporator temperature of -100°. We have no food-freezing plants working at this temperature now, but -100° is already becoming common in research and test work, and we may find it used on a larger scale within a few years.

(To Be Continued)

Fig. 3. Two-Stage System Using 'Freon-22'



FLOW DIAGRAM—2-STAGE FREON-22 SYSTEM

Diagram of two-stage system using "Freon-22" as the refrigerant, with operating conditions designated.

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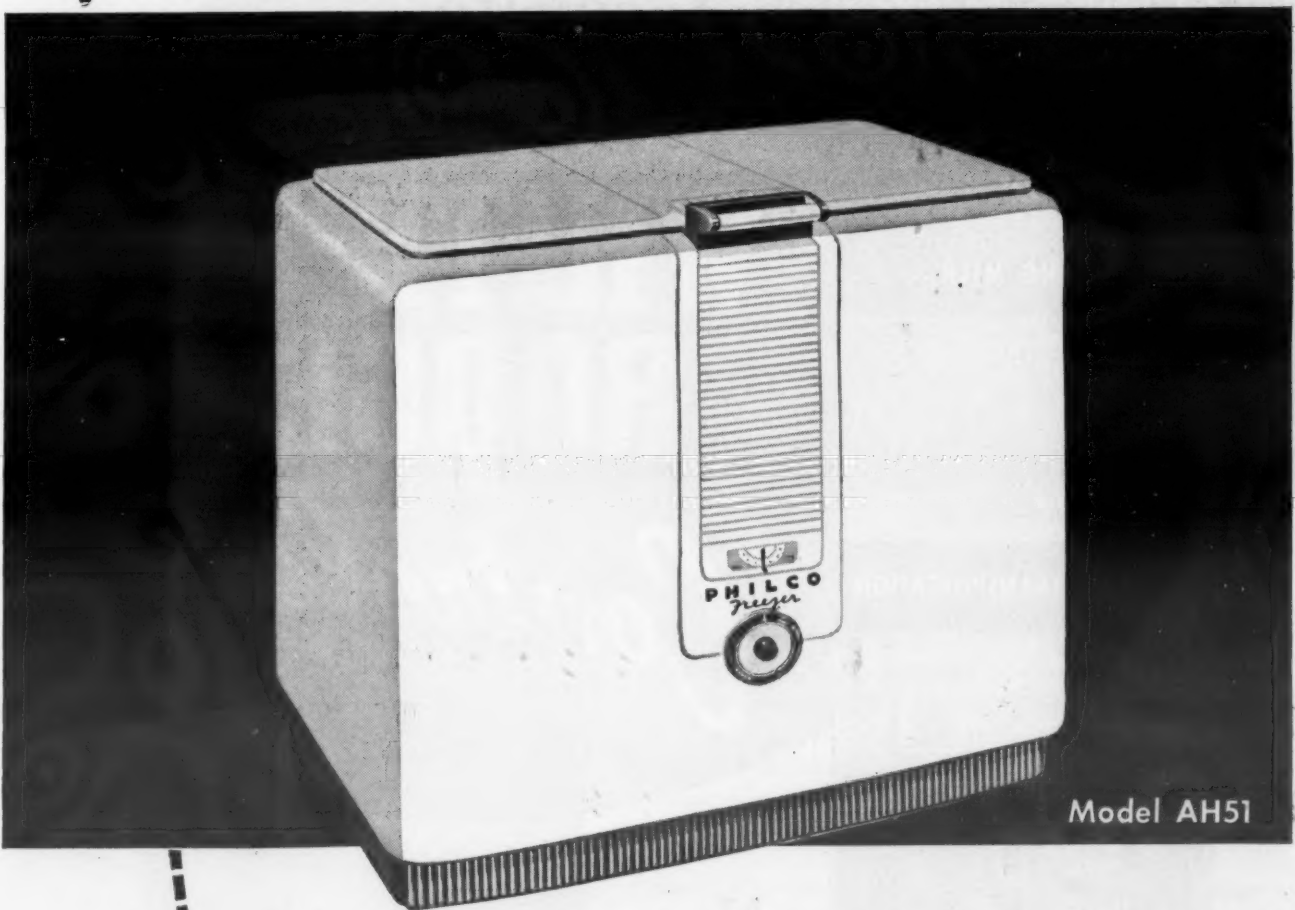
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## Proper Application of a Dryer Is In a Cold Location, Service Engineers Told

By C. Dale Mericle

TORONTO, Ont., Can.—Installation of a dryer in a cold location, preferably in the suction line within the refrigerated space, will give the most satisfactory performance, servicemen attending the Interprovincial RSES annual meeting here were told by K. M. Newcum, president of Remco, in a discussion on "Proper Application of Dryers."

Construction of dryers to permit cross-flow of a refrigerant across the drying agent was also advocated by Newcum, who showed on an operating demonstration unit how little pressure drop is caused by dryers made on that principle.

In explaining his recommendations for location of dryers, Newcum pointed out that the "early drying agents" such as calcium chloride, absorbed moisture by a chemical action.

"A dryer located in the hot liquid line, then, would do a better job in summer than in winter, because the additional heat in the liquid line would speed the chemical actions."

### Reason for Cold Location

"With the newer drying agents, however, we changed to a mechanical type of drying agent. With this type, such as silica gel, for example, there is no change in the chemical state of agent when it adsorbs moisture."

These new drying agents, he asserted, can hold less moisture when warm than when cold. In the conventional location in the liquid line, a

## Servicemen Get Pointers on Dryers



Indicative of how much interest servicemen have in dryers is this view which shows a crowd around a dryer demonstration setup with which Ken Newcum (left) of Remco showed (1) recommended location for dryers, and (2) how the cross-flow principle cuts pressure drop at the recent RSES conference in Toronto

modern dryer can hold less moisture in summer than in winter because the line will be hotter then, he said.

"The higher the vapor pressure, the less adsorptive is the modern drying agent. Thus, the higher the temperature, the less adsorbing quality," he explained.

"We are actually driving moisture out of the drying agent," Newcum said, adding that the application of heat is the way the drying agents are made dry.

"Let's assume," he said to illustrate, "that at 120° F. 'Freon-12' can hold 250 parts per million of moisture, and about 10 p.p.m. at 0° F. A dryer, we'll say, with liquid 'F-12' entering at 120° will reduce the moisture in the refrigerant from 250 p.p.m. to around 50 or 60 p.p.m."

"Then the refrigerant goes through an expansion valve set for 0° F., and since the 'Freon' can hold only 10 p.p.m. at that temperature, the expansion valve takes out almost as much moisture as the dryer did."

"This would mean frequent changing of dryers, but we'd still like to use silica gel or a similar drying agent instead of the older types. We can do this if we install the dryer

in a cold location."

Dryers should be installed after the expansion valve, or after the coil, he explained.

"In this way we are using nature. We are lowering the temperature of the dryer, cutting the vapor pressure, and cooling the refrigerant, which drives out moisture."

### Where To Place Dryer

"There are probably many installations where you can't put the dryer between the expansion valve and the evaporator, so here it could be put right after the coil. Dryers can also be installed in the suction line outside of the refrigerated space."

Other locations recommended by Newcum were in a bypass between the liquid and suction lines (especially for getting a wet system back in operation), in the liquid line within the refrigerator, especially between the heat exchanger and the expansion valve.

While he said he preferred suction line installation, Newcum pointed out that "anything you can do to cool the drying agent will help."

So, if it is installed in the liquid

(Concluded on next page)

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## Proper Application of Dryers--

(Concluded from preceding page)

line, the dryer ought to be within the refrigerated space, he advises, even though this may add a little heat because the dryer will act to a slight extent as a condenser.

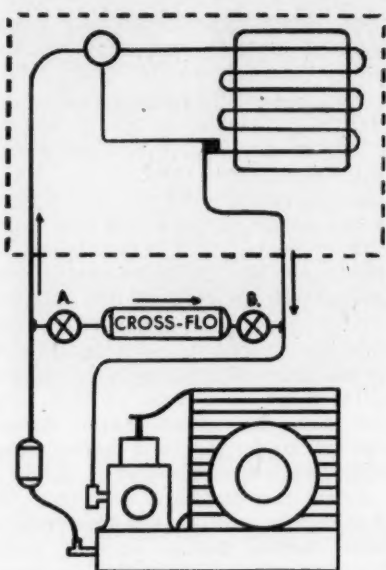
"Prime purpose of a dryer from a practical angle is to remove moisture and thus prevent expansion valve freeze-ups, the formation of sludges, and to permit low temperature applications," he declared.

Both chemical and physical properties of dryers and drying agents must be considered, and of the latter, ability to remove moisture without clogging or causing pressure drop in the refrigerant lines is most important, he said, especially in larger machines.

"The first refrigerant we had to dry in any quantity was methyl chloride," he recalled. "We simply used a pipe with screens which was filled with calcium chloride or calcium oxide. This worked well on small machines.

"Then our machines became bigger, which meant more refrigerant and more moisture, so we used bigger dryers. And then 'Freon' came along.

### In By-Pass Arrangement



This location of the dryer in a by-pass between the liquid and suction lines gives high drier efficiency because it takes full advantage of low temperature refrigerant. Operation is as follows: open valve B all the way. Open valve A slightly and regulate it to keep frost line between dryer and compressor. When drying operation is completed close valve A, pump liquid refrigerant out of dryer, then close valve B. Leave by-pass installed for subsequent use.

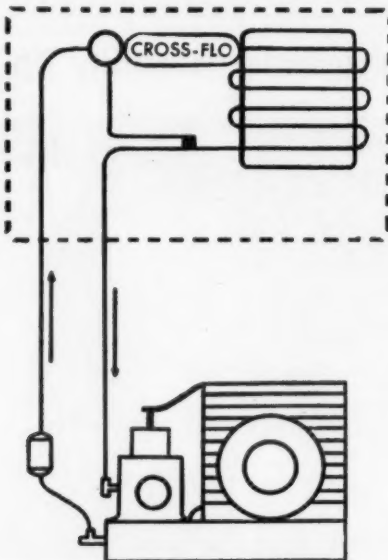
This meant that more refrigerant had to be circulated."

The greater circulation of refrigerant began to tax the net cross-sectional area of a dryer through which the liquid could pass. The net cross-sectional area was cut in size, too, with the coming of silica gel, Newcum declared.

"When dryers are lengthened to handle large machines without any increase in net cross-sectional area, there is more grinding of the drying agent, especially at the start of a cycle. This action grinds the drying agent into a powder and packs it, which causes a tremendous pressure drop that gets progressively worse.

"Eventually it will completely clog up, and this has cost the industry a lot of money," asserted Newcum.

### Best Spot--If Possible



In this location, between the refrigerant control and evaporator, the refrigerant temperature is lowest and efficiency of the dryer highest, Newcum states.

## Interstate Engineering Co. Names Divisional Sales Managers, Makes Some Line Refinements

EL SEGUNDO, Calif.—In line with its long-range expansion program, Interstate Engineering Corp. here has appointed several sales managers in charge of the company's various divisions.

Lee B. Cameron, as sales manager of the Compact Vacuum Cleaner Division, is in charge of national, as well as foreign, distribution of the ultra modern, streamlined electric Compact cleaner.

Robert W. Limacher is the new sales manager in charge of the Revelation Water Softener Division. Limacher states that with the introduction of the company's complete new line of modern water softeners, the company has incorporated the "Elgin

Double Check System," a feature (exclusive with Interstate for the western states), which eliminates the use of the cumbersome old-fashioned method of using a quantity of gravel.

O. Kimball Mobley, sales manager in charge of Interstate Aircraft Parts Division, is cooperating with leading airplane manufacturers on current models of production aircraft, as well as experimental models. This division is also a "Prime Contract" source for the U. S. Army and U. S. Navy.

John E. Koster, vice president in charge of sales, will continue in his present capacity and will also act as sales manager of the Revelation Water Cooler Division and the Automatic Drink Vendor Division.

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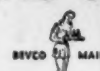


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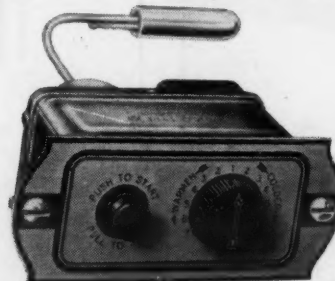
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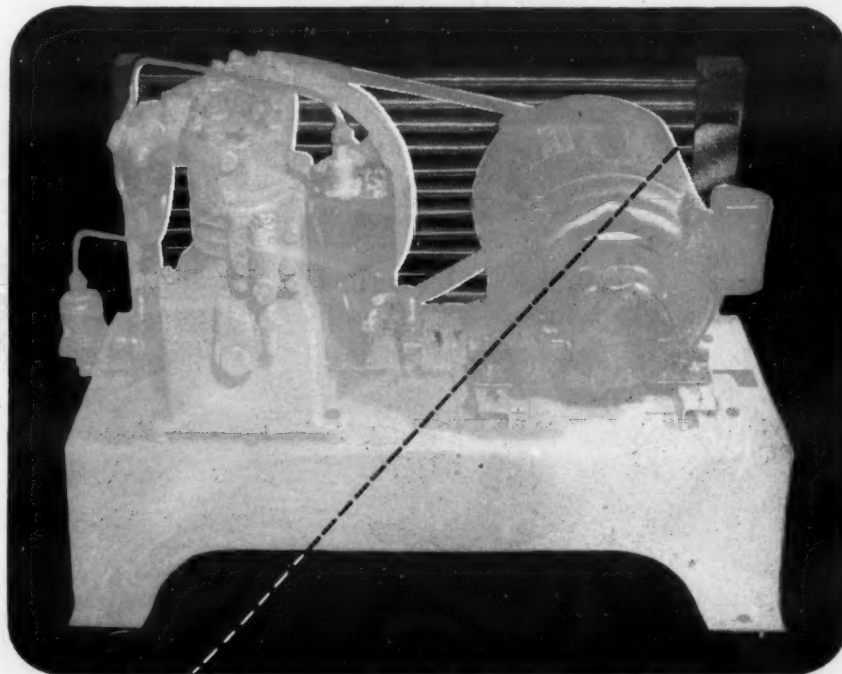


Photo shows 1 H.P. HM Condenser at work in a typical commercial refrigeration unit.

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Unit pictured 5 H.P.

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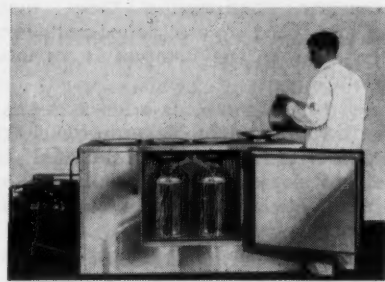
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## What's New



### 33° F. Water Spray In Cabinet Cools Milk Cans

WASHINGTON, Mo.—A milk cooling cabinet that refrigerates by spraying 33° F. water over the milk cans is being manufactured here by the Zero Mfg. Co., Inc.

The spray method, according to Zero, lowers the temperature of the milk to 50° F. by the time the can is filled during ordinary milking.

Also billed as a labor saver for the dairy farmer or cream buying station, the cabinet is equipped with a side door through which the cans can be placed inside or removed without heavy lifting.

Called the model T-33, the cabinet is built in 11 different sizes with capacities ranging from four to 12 10-gal. cans set in single or double

rows. Open type condensing units, mounted outside one end of the cooler, vary from ¼ to ¾ hp.

The cooler's measurements range from 71 to 112 in. in length and 21 to 35 in. in width. All units are 37 in. high.

In operation, milk cans are placed in the cooler through the side door. Milk is poured into strainers set in openings in the top of the cabinet and drains from the strainer into the can.

Cold water is continuously sprayed over the cans and, as fresh milk is added, the milk already in the cans is agitated for more rapid cooling. The cold can, the manufacturer claims, acts as an aerator and animal heat and odors are eliminated.

Below the platform on which the cans rest is a coil and baffle arrangement which forms an ice bank. Water is pumped from this ice bank, where it is held at 33° F., up to the sprays and from there it is propelled over the cans. It drips down the cans and through perforations in the platform to the ice bank where it starts the cycle all over again.

The spray can be controlled manually or automatically.

### Cee-Kleer Combines Filter, Drier, and Sight Glass

CINCINNATI — A drier which combines a sight glass with a dehydrator and filter has been developed by the B. & W. Sales Co. here and is now being sold under the trade name Cee-Kleer.

The Cee-Kleer drier, according to the company, is designed to assure free, full flow of the refrigeration agent in the maximum volume. It is said to provide a simplified method for installing a drier, filter, and sight in one unit on a refrigeration system.

Rated at ¼ to 1 hp., the drier has a ¼ or ¾ in. flare and ¼ in. pipe. It is made with all brass fittings and copper case and has screwed and soldered joints.

The dehydrant is 10 to 20 granular screened silica gel with a claimed effective area of more than 10 cu. in. The drier's 8½ sq. in. of effective filtering surface is comprised of 100 mesh screens and a ¾ in. felt sack. Suggested list price is \$9.50 each.



### Secondary System Keeps Refrigerator Humidity Up

CINCINNATI — Heading a group of 8-cu. ft. refrigerators in Crosley's new line is the Model SD-88, which carries a suggested retail price of \$359.95.

As shown at right, this model offers 8.6 cu. ft. of refrigerated storage plus 1.4 cu. ft. of dry storage in the Storabin.

Along with the four others in the Shelvador line, Model SD-88 received its first public showing in New York City March 31. Featured in this model are storage space for 50 lbs. of frozen foods as well as a secondary refrigerating system that keeps humidity high for preserving vegetables.

Glass is not only used in the vegetable



table crisper, but also in the frozen food section where an extra thick, bottom-hinged glass door serves as a convenient rearranging shelf.

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**NEW STANDARDS**

**NEW SEAL**

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ALL PURPOSE COPPER TUBE

**NOW—MORE THAN EVER . . .**  
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Until now, all Revere Dryseal Copper Refrigeration Tube — regardless of diameter — has been made with an .035" wall. Now Revere is the first to offer you refrigeration tube in new, more economical dimensional standards.

In addition, the new Revere Dryseal Tube has a double-groove mechanical seal. It is compact enough to pass through any opening large enough for the tube itself. It permanently keeps the interior of the tube clean and bone dry.

Look for the new red and blue Revere Dryseal package. It protects the tube, takes up less storage space and is easier to unpack.

Revere Dryseal Tube comes in sizes from 1/8" to 3/4" O.D. and is packed two 50-foot coils to a package.

Ask your Revere Distributor for all the new facts on the new Dryseal—the easy-to-bend copper refrigeration tube that assures you of fine quality in every length you buy.

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## What's New (Cont.)

### New Ebco Cooler Designed For Heavy Industry Use

COLUMBUS, Ohio—The Ebco Mfg. Co. has put into mass production its heavy duty rust and corrosion-resistant dustproof model OP-10W Oasis electric water cooler.

The "recommended uses" for the model OP-10W Oasis are "steel mills, foundries, tobacco factories, paper mills, textile mills, laundries, and those applications where lint is present, high temperature or high humidity conditions exist."

A. R. Benua, president of Ebco, states that the water-cooled condensing unit and other mechanical parts are effectively protected by being hermetically sealed in a pressurized air-tight cabinet of heavy gauge galvanized and Bonderized steel. Extra insulation is used to prevent condensation that might occur inside the cabinet.

The model OP-10W Oasis has a storage capacity of 10 pints of properly cooled water, a cooling capacity of 10 gallons an hour, and a serving capacity of at least 70 persons an hour in light industry and at least 40 persons an hour in hot, heavy manufacturing, a company statement said.

It requires floor space only 15½ by 15½ in. It operates on 110 volt, 50-60 cycle single phase alternating current only.



### Truck Lifts 2500 Lbs. of Refrigeration Equipment

LOS ANGELES—Perfecold Co. of Los Angeles, commercial refrigeration firm, has developed a new low-cost equipment handling apparatus especially for the refrigeration industry, known as the Perfecold "Liftruk."

Designed by refrigeration engineers to meet refrigeration equipment handling problems, the Perfecold Liftruk introduces a method of moving bulky cargo in shipping rooms, warehouses, display rooms, and in the field. The Liftruk needs no fluids, no recharging, and no maintenance.

Consisting of two trucks weighing 48 pounds each, the Liftruk set has a recommended capacity of 2,500 pounds, and is designed so that one man can move capacity loads on level surfaces. Two men can handle capacity loads on inclines.

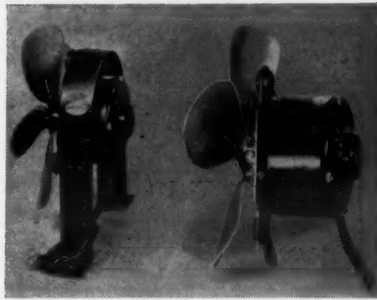
With the Liftruk, cargo can be moved forward, sideways, turned around, and pivoted, even on varying surface levels. The apparatus is

highly portable, and can be carried on delivery trucks, and stored in small space.

Among the outstanding features of the product are its low center of gravity which minimizes tipping and cuts breakage loss; double-lift action which lifts at two points with one lever arm; padded cross supports for cargo protection; blade hook for extra lift; adjustable nose plates to accommodate loads of varying dimensions.

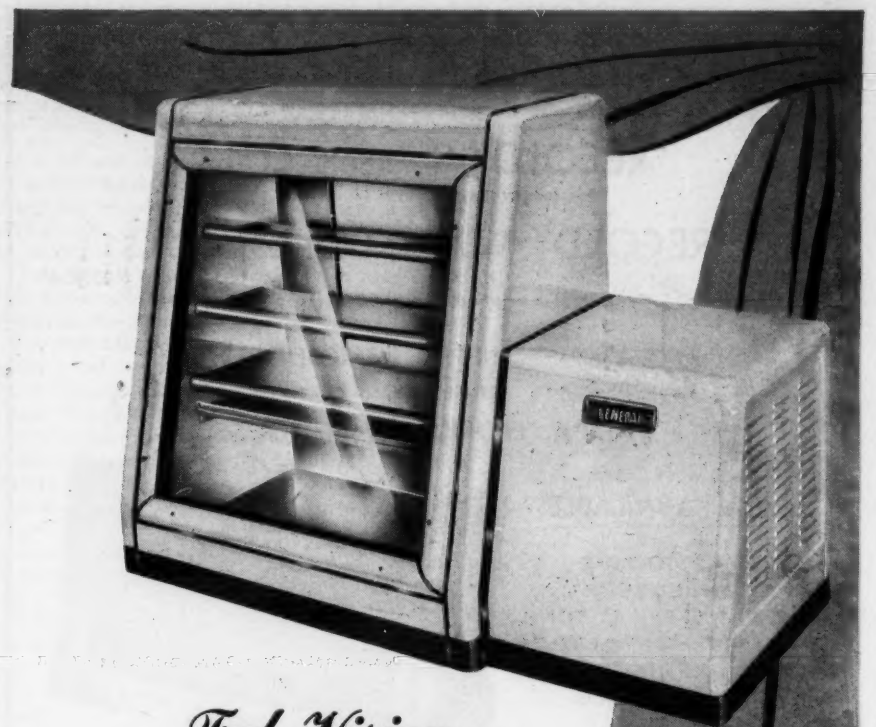
Other features include rubber-tired wheels which prevent marring of display floors; positive operating handle lock to insure utmost safety; and lifting handles designed to guide and raise most any cargo over varying floor levels.

### Hermetic Fans Feature Varied Bracket Mountings



PITTSBURGH—Airsco Mfg. Co., Inc. here has just introduced a new line of "exact fitting" hermetic condenser fans. Featured in these fans, the company says, is an unusual and exclusive method of mounting various types of brackets to a single motor and blade assembly.

Suction service and blower unit type fans are included in this new line. Individually packed and cataloged for all popular makes of refrigerators, the fans are being made available for immediate shipment to the trade.



### Ful-Vision DISPLAY CASE

Available for immediate delivery both self contained and remote in 4, 5 and 6 ft. lengths.

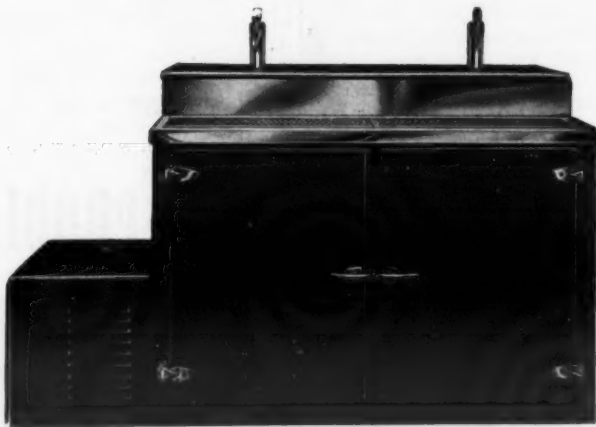


**Do You Have 'One Foot In the Door'?**

## SUMMER'S COMING — ORDER NOW

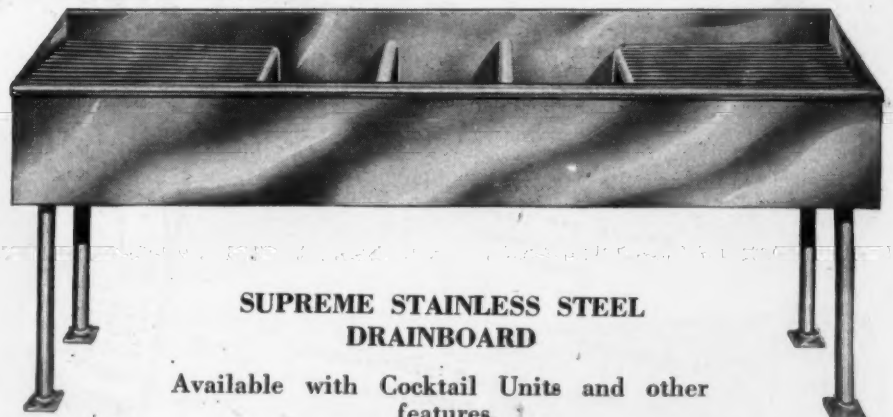
Be ready for summer—fill your commercial refrigeration requirements from the complete line of La Crosse equipment. Models shown below as well as many others are

available now. Structural design, manufacturing skill and complete knowledge of what's needed in the refrigeration field is your assurance that—La Crosse is the Buy.



### THE LA CROSSE ELECTRIC DIRECT DRAW

Quality equipment used throughout guarantees the best in serviceability. Also available in 3 compartments—one of which is equipped with adjustable shelves for bottle storage.



### SUPREME STAINLESS STEEL DRAINBOARD

Available with Cocktail Units and other features.



### THE LA CROSSE COMPANIONS

The La Crosse Dry Storage Bottle Cooler now has an identical—side by side—companion piece, the La Crosse Ice Cube Maker. The Cooler features rollback, well insulated lide—adjustable wire partitions. The Cube Maker has 21 quick release trays—14 cubes ea. with storage capacity of approximately 900 cubes plus 294 cubes in trays. Together, it's an equipment pair that can't be beat!!



## LA CROSSE COOLER CO.

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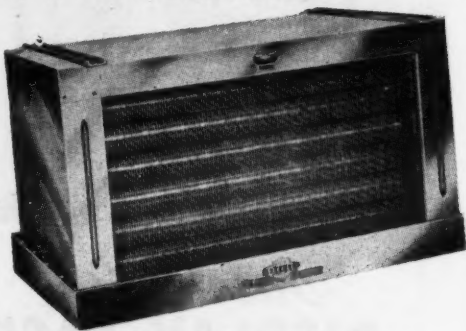
For temperatures below 32 degrees.

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## Refrigeration Problems

### And Their Solution

By P. B. Reed

For Service and Installation Engineers



Manager, Refrigeration  
and Air Conditioning  
Division, Perflex Corp.

## Refrigerant Cylinders (Continued)

### SERVICE CYLINDERS MOST APT TO BECOME OVERFILLED

Small service cylinders have no protective device; neither fusible plug, rupture disc, nor spring release. Moreover they are the ones most apt to be overfilled, for they are filled by the service engineer or others who may not have facilities for accurately weighing in the amount of refrigerant, as factories. Manufacturers and even wholesalers usually have more elaborate equipment to assure a correctly measured fill.

The Refrigeration Service Engineers Society has called these matters to the attention of the Bureau of Explosives and the Refrigerant Gases Committee of the Compressed Gas Manufacturers Association are investigating methods for providing protection to service cylinders.

They favor a spring release type of device, which is of course more desirable than the fusible plug. They have been very cooperative and interested in the safety of service and maintenance engineers, wholesalers

personnel and others who fill and handle refrigerant cylinders.

ICC regulations do not require that the internal volume of the cylinder be stamped on the cylinder but some manufacturers do this of their own accord.

Due to the sloping neck of the cylinder, and a concave bottom it would be quite difficult to measure the cylinder and calculate from the measurements, the internal volume. Besides, the size is not always exactly uniform, and the thickness of the wall is not easily determined.

### WATER VOLUME OF CYLINDERS

Another method of determining the internal volume of a cylinder has been in use many years. It involves merely weighing the cylinder empty, then completely filling it with water and again weighing it; the difference being the weight of the water. This net weight of the water can then be divided by the liquid density in pounds per cubic foot, of the water at its temperature to determine the internal volume of the cylinder in cubic feet.

If the cylinder empty, weighs 74 pounds and entirely filled, 169½ pounds, the weight of the water is 95½ pounds. If the water is at 100°, its liquid density is 62 pounds per cubic foot, so 95½ pounds would be (95.5 ÷ 62) 1.54 cubic feet, which is the internal volume of the cylinder.

It has become customary among cylinder and refrigerant manufacturers to refer to the internal volume, not in terms of cubic feet, but instead, in terms of "water volume" at 60°. ICC regulations are based on water volume and they specify the maximum amount of refrigerant that can be put into a cylinder, not as so many pounds per cubic foot, but by the percentage of the total amount of water volume, and this percentage is called the "filling density."

For example, as mentioned previously, the amount of ammonia that ICC allows to be put into a cylinder is based on the cylinder being liquid-full at 146°. At 146° the liquid density of ammonia is 33.7 pounds per cubic foot.

### ICC FILLING DENSITY

Since one cubic foot of water at 60° weighs 62.4 pounds, then that same one cubic foot would hold only about one half as much ammonia as water for the ammonia is much lighter than the water.

Exactly, it would hold .54 or 54% as much ammonia as water (33.7 ÷ 62.4), so if we have a cylinder that has an internal volume of 1.7 cubic feet it will hold at 146°, 57.3 pounds of ammonia (1.7 x 33.7).

Or, if instead of saying that the cylinder has an internal volume of 1.7 cu. ft., we say that it has a water-volume of 106.1 pounds by .54, we get 57.3 pounds of ammonia as the safe amount of ammonia that can be put into this cylinder.

Thus, to obtain the maximum amount of refrigerant that ICC permits in a cylinder we simply multiply the water-volume of that cylinder (the number of pounds of 60° water it will hold) by the ICC filling density.

Table 6 gives the ICC filling densities given in Tariff 4.

TABLE 6

Refrigerant	ICC Filling Density
Ammonia	.54
Carbon Dioxide	.68
"Freon-12"	1.19
Isobutane	.46
Methyl Chloride	.84
Sulphur Dioxide	1.25

It will be noted that of these six refrigerants two, "Freon-12" and sulphur dioxide, are heavier than water and, therefore, have filling densities over one. The other six,

(Continued on next page)

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## REFRIGERATION'S BIGGEST PROBLEM!

### Important Questions

#### ...IN SELECTING A DRIER

1. Does the material dry the refrigerant below the corrosion limits when placed in the liquid line? In the suction (vapor) line?
2. Does the material dry the refrigerant below the limits for ice formation with methyl chloride and the "Freon" refrigerants?
3. Does the material accomplish the drying in one passage of the refrigerant, or is it slow, i.e., requires several passages?
4. Does the material deteriorate in physical character in handling or when it removes water from the refrigerant?
5. Does the oil affect the drier adversely?
6. Does the drier corrode?

#### DRYING POWER OF VARIOUS MATERIALS

Drier	Refrigerant	Liquid or Vapor	Max. Residual Water Concentration After Passage Through Drier	
			.35% Initial Water Concentration	.02% Initial Water Concentration
ACTIVATED ALUMINA	Sulfur Dioxide	L	.15	.005
	Methyl Chloride	L	.01	.006
		L	.02	
		V	.01	
SILICA GEL	Sulfur Dioxide	L	.15	.006
	Methyl Chloride	V	.01	.004
		L	.01	
		V	.01	
DRIERITE (Calcium Sulphate)	Sulfur Dioxide	L	.15	.009
	Methyl Chloride	V	.05	.003
		L	.08	
		V	.04	
CALCIUM CHLORIDE CaCl <sub>2</sub>	Sulfur Dioxide	L	.09	.013
	Methyl Chloride	V	.03	.005
		L	.10	
		V	.04	
CALCIUM OXIDE CaO	Sulfur Dioxide	L	.30	—
	Methyl Chloride	L	.15	—
		L	.15	—
		V	.08	—
BARIUM OXIDE BaO	Sulfur Dioxide	L	.30	.017
	Methyl Chloride	L	.15	.006
		L	.05	
		V	.05	

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DISTRIBUTORS FOR KINETIC'S "FREON-11," "FREON-12," "FREON-21," "FREON-22" AND "FREON-113"



## Cylinders--

(Continued from preceding page)

being lighter than water, have liquid densities less than one.

Table 7 shows the filling densities that, although not specifically stated in Tariff 4, yet are the filling densities that would result in the cylinder being liquid-full at just over 130°.

TABLE 7

Refrigerant	Filling Density (based on 130°)
Butane	.53
Ethyl Chloride	.84
"Freon-11"	1.40
"Freon-21"	1.29
"Freon-22"	1.05
"Freon-113"	1.49
"Freon-114"	1.25
Propane	.40

From Table 7 it will be seen that all of the "Freons" shown are heavier (at 130°) than water (at 60°). "Freon-22," the lightest of the "Freons," at the same temperature of the water (60°) is actually about 10% heavier than water.

### REMOVING REFRIGERANT

All of the above was based on the safe amount of refrigerant that can be put into a cylinder; no mention being made of removing the refrigerant.

Ordinarily it is much better to remove refrigerant in vapor form rather than in liquid form.

In vapor form, refrigerant only is removed, while if the refrigerant is taken out in liquid form, dirt, moisture scale and other impurities are taken out.

On large installations, involving several hundred pounds of refrigerant, it would be too slow a process to transfer the refrigerant from the cylinders to the equipment in vapor form. Moreover, in such instances the refrigerant is in large cylinders, filled at the factory, where careful precautions are taken to clean and dry the cylinder before it is filled with refrigerant.

But it is much better to remove refrigerant in vapor form from small cylinders, especially service cylinders, that are filled from larger cylinders, emptied and refilled, so that they may accumulate a great deal of moisture and dirt. Sometimes these cylinders are used to withdraw refrigerant from an old machine and it may have considerable dirt and moisture in it.

### SAVING 'FREON-12'

It is frequently overlooked how much refrigerant is left in the cylinder after it has been emptied. Suppose that you have a 145 pound cylinder of "Freon-12" at room temperature of 70°. The "Freon" is "poured" put into the equipment in liquid form. When it appears to be empty, the valve is closed and the cylinder disconnected and set aside to be sent back for credit.

Was it really empty? When the valve was closed the cylinder was filled with saturated "Freon-12" vapor at 70°. This size cylinder has an internal volume of 1.967 cu. ft. and the 70° saturated vapor has a density of 2.028 pounds per cubic foot, or 3.99 pounds for the 1.967 cu. ft.

At cost, this is two or three dollars worth of "Freon-12" that you are sending back to Kinetic Chemicals. They don't want it. They don't dare use that four pounds. It may be contaminated with dirt, moisture, or scale; so they dispose of it, and inspect and clean the cylinder.

You should pump this cylinder down to about a 28 in. vacuum. In this way you can recover almost all of the four pounds that you would otherwise lose. Do not pump below a 28 in. vacuum for you then begin to get down to the pressure at which water boils at normal room temperature, so you do not run much risk of taking moisture out if there is any in the cylinder.

You need not worry about factory-

filled cylinders being dirty, but your service cylinders should be inspected every few months, depending upon how much they have been used and especially if they have been used to withdraw refrigerant from installations.

### INSPECT AND CLEAN SERVICE CYLINDERS

See that they are empty and have no pressure in them. Open the valve to assure this. Unscrew and remove the valve and fusible plug or other protective device if any. While the valve is out, you may wish to repack the gland, put in a new stem or otherwise repair it.

Inspect the inside of the cylinder. A small flashlight can be used or better, the small light on a flexible stem, that are sold in drug stores to examine the throat.

If it appears scaly, put some ball bearings in it, or better the chilled jacks that are used in foundries. Shake the cylinder vigorously for several minutes, and shake out the scale, ball-bearings, and jacks. You can then wash out the cylinder with hot water and blow it out with carbon dioxide.

If it seems rather dirty or rusty, it may be pickled with an acid solution of 3 or 4% muriatic (hydrochloric) acid. It must then be rinsed thoroughly, preferably with hot water through a tube to the bottom of the cylinder. Rinse two or three times for five or ten minutes each.

Live steam is a very satisfactory method that both rinses and blows out the cylinder.

After the first rinse, it may be helpful in neutralizing any acid left, to put in a handful or so of baking soda and some hot water and slosh it around thoroughly and with the cylinder on its side to wet and rinse the entire interior. If the first pickling did not remove the scale it may be necessary to repeat and of course rinse afterward.

Finally, put it in your oven and bake it dry. Then, while the cylinder is still warm but not hot, put in a little liquid "Freon-12" and final rinse with it.

Replace the valve and fusible plug, using freshly-made litharge and glycerin. Put in enough of the refrigerant it is to contain to bring the pressure up to atmospheric, to keep out air, and close the valve.

Having the cylinder open and cleaning it gives you a chance to fill it with water and weigh it so as to determine its water volume. It is a good idea to paint or stamp this on the cylinder for future information.

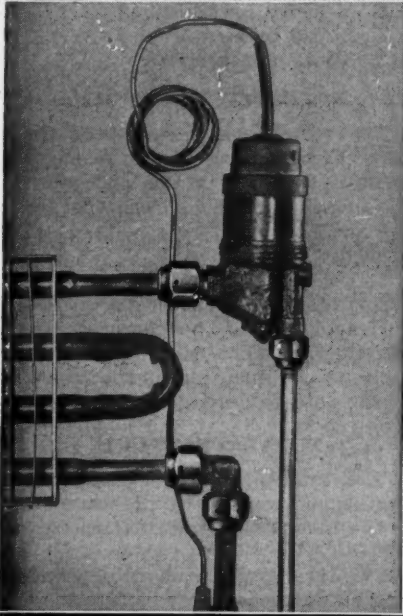
### SUMMARY

1. Do not fill cylinders with more refrigerant than allowed by ICC; and especially is this true of those refrigerants whose filling densities are based on less than 140°.
2. Do not fill cylinders by guess; weigh the refrigerant in.
3. Do not use, nor ask anyone to fill for you, cylinders that are out of the 5 or 10 year test periods, according to the last date stamped on the cylinder.
4. Do not allow filled cylinders to stand exposed to the rays of the hot sun, either open or under glass as in an auto.
5. Do not play a flame on a cylinder, nor put in water above 130°.
6. Keep cylinders clean and dry. Do not put refrigerant taken from a system in with new refrigerant.
7. Periodically test your cylinders by pouring a little liquid refrigerant from each into a glass. Discoloration or small black pieces indicates dirt or scale and that the cylinder needs cleaning.
8. Do not use home-made cylinders, unless they have been given the same ICC tests as factory cylinders.
9. Damaged cylinders with bulges, dents, or that show evidence of having been in a fire, should be retested before use.

(To Be Continued)

## STA-TITE

THE REFRIGERATION FLARE NUT which cannot Creep or Work loose



Moisture will work its way along the threads, to fill the space between the fitting and the inside of the flare nut. Confined in this space, the water, in its attempt to freeze during the operating cycle, develops a tremendous pressure—16,400 p.s.i. at 20° F. Something has to give at such high pressures... (1) the nut may stretch, (2) the male fitting may collapse, (3) the copper tube flare may extrude... any one of which will allow the flare nut to loosen. You know the rest—moisture in the system and/or loss of refrigerant. A condition which has long baffled the refrigeration industry.

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Get "STA-TITE" Flare Nuts from your jobber. Use them on all connections which are subject to frequent or occasional frosting and defrosting. Banish "creeping" and leaks forever!

"STA-TITE" is another Superior contribution to better refrigeration!

\*U.S. Patent 2,323,099

NO.134



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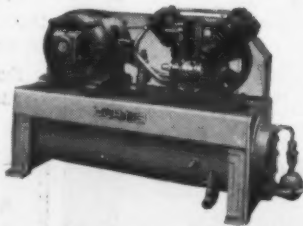
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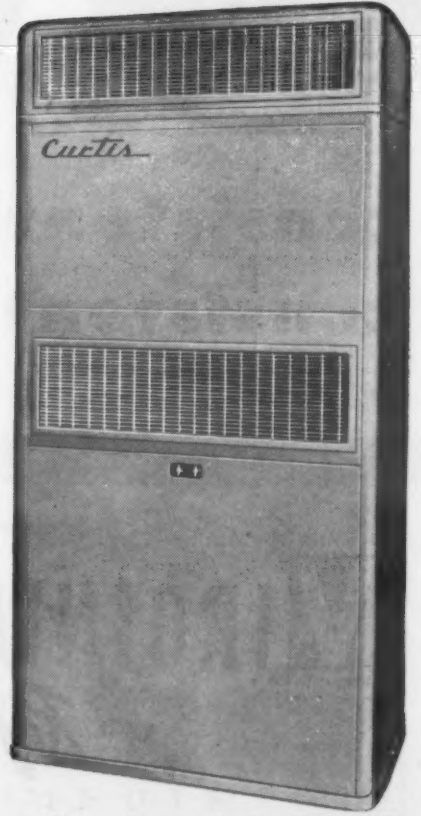
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## Sheet Metal Ducts (Cont.)

### BUILT-UP CASINGS

Fig. 8 shows a typical detail of how a casing should be built for use when all of the air is to pass through the cooling and heating coils. Certain distances must be allowed between the equipment in the casing for their proper functioning as well as to give gradual flow to the air stream.

When using heating coils, the steel supports should be at least 18 in. high

to allow for the installation of the steam traps; otherwise supports may be about 8 in. high.

In all casing construction all moisture and water spraying should be kept within bounds of the drain pan. The drain pan should have soldered joints to make it water-tight.

It is good practice if possible to have a separate compartment for the expansion valves, which should not be installed in the air stream.

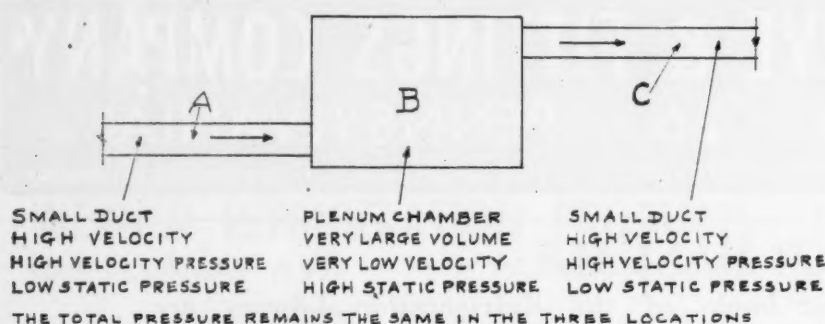


Fig. 9—This shows how a plenum chamber affects air pressures. Note that the total pressure remains the same.

Proper size and location of access doors is very essential for servicing.

In the flow of air in a duct system three different kinds of pressures must be considered:

1. Velocity pressure.
2. Static pressure.
3. Total pressure.

### VELOCITY PRESSURE

The velocity pressure is the pressure corresponding to the velocity or force of the air in the duct and is the measure of the kinetic energy in the air.

### STATIC PRESSURE

The static pressure is the pressure corresponding to the compressive or bursting pressure existing in the air while in the duct, and is the measure of the potential energy in the air.

### TOTAL PRESSURE

The total pressure is the sum of the velocity and static pressures, and is the measure of the total energy in the air.

The ratio of the amount of velocity and static pressures, which forms the total pressure, varies with each duct system.

Part of the velocity pressure can be changed into static pressure, and conversely a part of the static pressure can be changed into velocity pressure. These changes occur in a pronounced way in conjunction with a plenum chamber as in Fig. 9.

According to Fig. 9, when the air from duct A enters plenum chamber B, the velocity is greatly lowered so that the velocity pressure is converted practically all to static pressure. This is so because the total pressure remains practically constant. Conversely when the air enters duct C the velocity is again increased, which action causes the static pressure to be converted back to velocity pressure.

The total pressure represents the resistance pressure, which the system has to work against and which a proper size of fan and motor must be selected to overcome.

### VELOCITY PRESSURE

For each velocity there is a corresponding velocity pressure. The higher the velocity, the higher is the velocity pressure. Fig. 10 shows the corresponding velocity pressures and velocities.

**Example:** What is the velocity pressure for a velocity of 2,000 f.p.m.?

Referring to Fig. 10, locate 2,000 f.p.m. velocity and project upwards until Point A is reached. Now project to the velocity line on the left and read the velocity pressure as .25 in. of water.

### PRESSURE LOSSES FOR VARIOUS PARTS OF DUCT SYSTEM

A duct system is made up of various pieces or parts, all of which have a certain amount of pressure loss.

The straight duct usually offers the least resistance for each lineal foot. All other parts are barriers and restrict the easy flow of the air characteristic of a straight duct. Therefore, special allowances must be made to overcome these barriers.

These parts do not restrict in the same amount but vary; some offer greater resistance than the others. This resistance is based entirely on the velocity of the air which must flow through these parts.

Therefore, this resistance is measured in terms of velocity pressure.

Fig. 11 shows these various parts, the pressure loss being given in the amounts of velocity pressures.

Referring to Fig. 11 we notice the following:

It is best to use vanes in elbows in order to cut down resistance.

When using 90° elbows, employ the large radius whenever possible to cut down resistance.

Dampers offer resistance in accordance to the type.

(Continued on next page)

### AN ADVANCED COURSE

In Refrigeration, Air Conditioning and Heating. Now taking enrollments for June 8 and September 7 classes.

Write for booklet.

**DETROIT AIR CONDITIONING INSTITUTE**  
4125 GRAND RIVER  
DETROIT 8, MICHIGAN

Fig. 8—Typical Built-up Casing for Coils, Sprays, and Filters

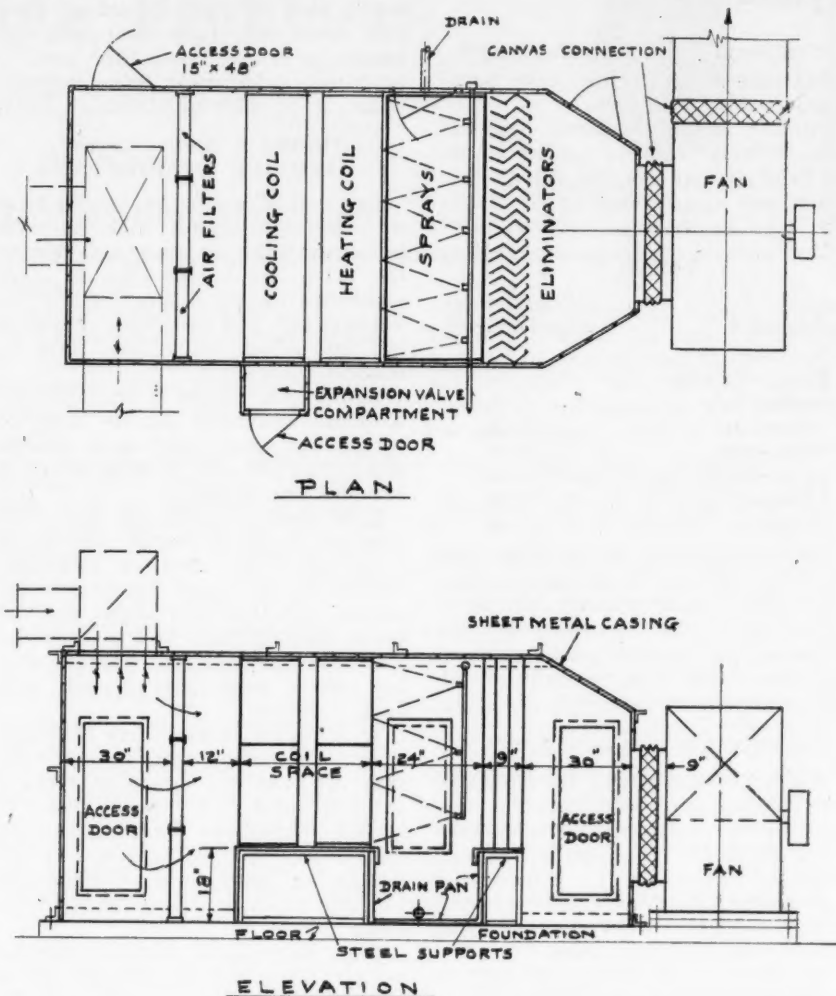


Fig. 8—Here are plan and elevation views of a typical built-up casing which houses both heating and cooling coils for an air conditioning system as well as a bank of filters and water sprays.

## VIRGINIA REFRIGERANTS

"V-METH-L"

Methyl Chloride

"EXTRA DRY ESOTOO"

Liquid Sulfur Dioxide

consistently pure  
consistently sure



**VIRGINIA**

*Refrigerants*

West Norfolk • New York • Boston • Detroit

VIRGINIA SMELTING COMPANY, WEST NORFOLK, VA.

Distributors for Kinetic's "Freon" Refrigerants

## HOW TO BEAT COMPETITION AND MAKE MORE MONEY

... selling air conditioning units

- Survey the field. There are many air conditioning units on the market. Each has its own claim to fame.
- But, in the long run, there's only one yardstick by which any unit can be measured.
- How profitable is the installation? Does it give complete customer satisfaction? Will it stand up in service?

### Ask yourself another question

- Why have hundreds of Rogers Self-Contained Air Conditioning units been sold at higher prices than competitive makes?
- The answer is the key to better business. A Rogers Conditioner is a quality product of proven superior performance and remarkable freedom from service troubles. That's why Rogers Conditioners make profitable installations and build good will.

*And Now...*

**EXPANDED PRODUCTION FACILITIES MAKE POSSIBLE A LOWER PRICE FOR ROGERS AIR CONDITIONING UNITS—FOR ALL SIZES**

A quality product...  
lower prices... immediate delivery...  
Work this triple play for a high profit score this season!

**ROGERS CONDITIONERS**  
manufactured in  
3-5-7 1/2-10-15-20- and 25 ton capacity units



**ROGERS SC-500**  
5 TON CAPACITY SELF-CONTAINED AIR CONDITIONING UNIT

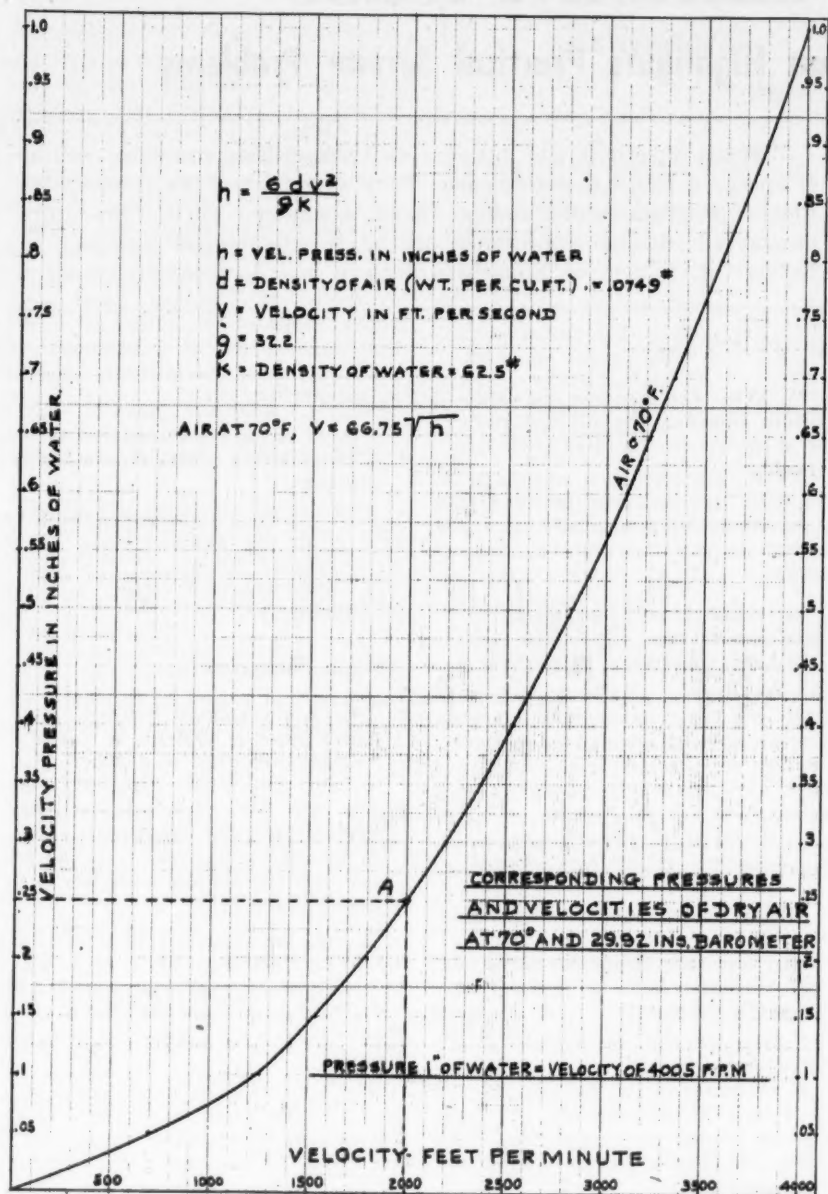
Unexcelled for use in homes, stores and offices. All automatic controls, internal wiring and charge of Freon 12 refrigerant included and shipped from factory.



**ROGERS AIR CONDITIONING**  
DIVISION OF INDIAN MOTORCYCLE CO.  
724 GARRISON AVE., NEW YORK 59, N. Y.  
Manufacturers of  
Rogers system of Chemical Dehumidification with TEG  
Coe Cooling Towers



Fig. 10—How Velocity Pressures Correspond to Velocities



## Metal Ducts--

(Continued from preceding page)

Grilles and registers offer resistance according to the velocity of the air passing through.

Transitions offer resistance according to the type.

Eliminators offer resistance according to the number of passes.

### RESISTANCE PRESSURE OF A DUCT SYSTEM

The resistance pressure of a system is arrived at by adding various sub-resistance pressures: such as, ductwork and its various parts, air filters, cooling coils, heating coils, eliminators, and grilles.

No pressure loss is allowed for the fan, as this is taken care of in the

fan tables by the fan manufacturer.

The resistance pressure of a duct system is always taken from the grille farthest away from the fan, and just that duct from that grille back to the fan.

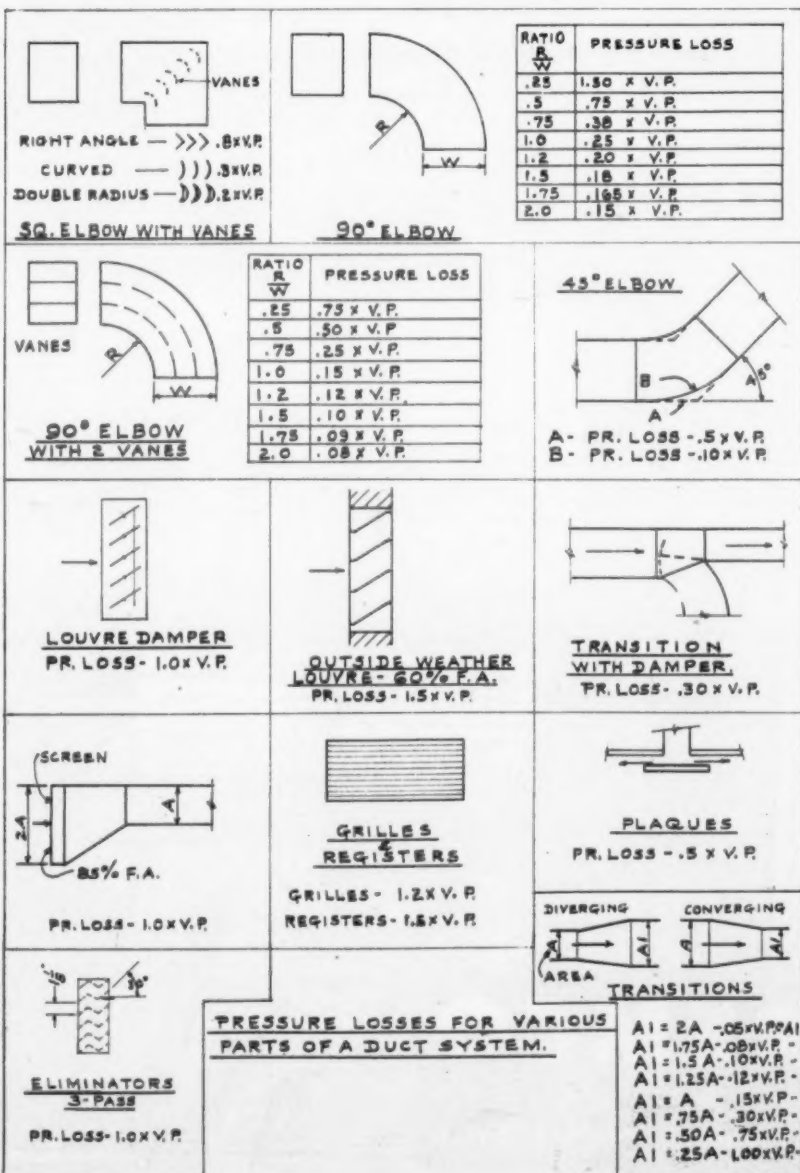
The supply duct, return duct, and outside air duct are usually calculated separately.

The supply duct is always used. The return air duct and outside air duct are not both used, but the one that has the greatest pressure loss must be used.

The resistance pressures are usually noted to the nearest  $\frac{1}{8}$  in. up to 2 in., and  $\frac{1}{4}$  in. above 2 in. Fan manufacturers' tables are set in this manner for easy selection of fans.

(To Be Continued)

Fig. 11—Pressure Losses for Various Parts of Duct System





## HEAT INTERCHANGER



KRAMER TRENTON CO. Trenton 5, N. J.

## REFRIGERATION AND AIR CONDITIONING UNITS • PARTS • TOOLS • SUPPLIES

Now Ready! New AIRO CATALOG 48A



★ Bigger. ★ Better ★ Up-To-Date!  
MORE OF THE LINES YOU WANT

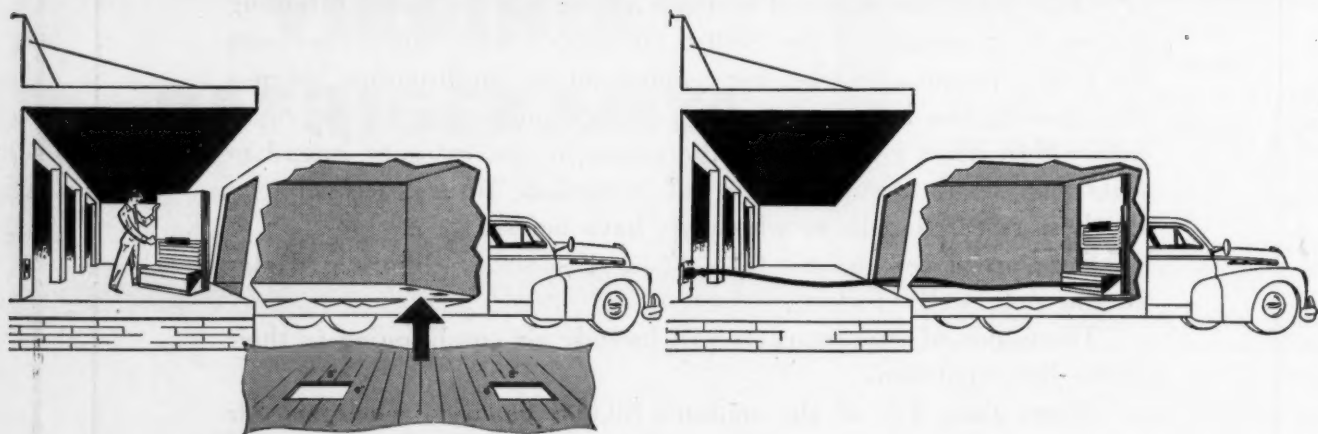
★ Important new lines added . . .  
Many pre-war items back again.

SEND FOR YOUR COPY TODAY  
ON YOUR LETTERHEAD

AIRO SELLS WHOLESALE ONLY

**AIRO SUPPLY CO.**  
2732 N. ASHLAND AVENUE • CHICAGO 14, ILL.

## Here's NEW CONVENIENCE in Truck Refrigeration



## A complete, packaged TRUCK REFRIGERATION UNIT that you can install yourself

The utmost simplicity of the new Kold-Hold Packaged Refrigeration Unit pays dividends for you in lower Truck Refrigeration costs. Just push the Unit into the truck, bolt it in place and it's ready for operation.

The cooling cycle is started by merely plugging-in to any 110 volt electric outlet. Thus, you can build refrigeration in the truck wherever electricity is available. The "Hold-Over" Plates in the unit will maintain the predetermined low temperature of the truck throughout a day's deliveries.

**What Is It?** A complete assembly of all units necessary to adequately refrigerate an average truck 40° to 50° temperature for a day's run.

**How Does It Work?** Unit is shipped complete, ready to install. Push into truck, cut holes for air intake and discharge, bolt to floor and plug into electrical outlet.

**Is Body Work Required?** No. The unit is adjustable to fit most any truck. No "dog house" for compressor, no change of body or expensive installations are required.

**How Long To Freeze Plates?** Ample plate refrigeration for extreme weather conditions.

**How About Long Runs?** Truck Contents are easily protected on runs of 2 days or longer by simply plugging-in at any gas station, garage or overnight stop.

**What Is Operating Cost?** The 1 hp. compressor has capacity of 42,000 BTU's in 10 hours and operates for a few cents a day. Any refrigeration man can service if ever necessary.

**How Does It Compare With Ice?** The Kold-Hold Unit provides a more dependable refrigeration at less cost. There is no slime or bother.

**Is This New?** It is new only in that it is a packaged unit. Kold-Hold Refrigeration Plates have given satisfactory operation for hundreds of users for over 15 years.



New bulletin describes the many advantages of Kold-Hold PACKAGED Truck Refrigeration. Write for your copy today.

**KOLD-HOLD**

Jobbers in Principal Cities

protects every step of the way

STORAGE

KOLD-HOLD MANUFACTURING COMPANY - 500 E. HAZEL ST., LANSING 4, MICHIGAN

## 'Information Please'

### Toronto Quiz Session Highlights Practical Service Problems

These questions and answers on refrigeration problems will be of special interest to servicemen. They were part of the Information Please program which Harry Parish conducted during the ninth annual educational conference of the Interprovincial Association, Refrigeration Service Engineers Society held in Toronto recently.

#### Oil Well Tubes

**Q.** Why don't motor manufacturers improve the oil well tube so a motor can be oiled with less trouble?

**A.** One manufacturer recently said he was definitely going to improve the oil well connections on his line of motors.

**Q.** What effect does oil in the refrigerant have on silica gel's moisture adsorption property?

**A.** All drying agents would work better on pure refrigerant. Dryers, however, have an affinity for moisture, not oil, so the oil has no serious effect. We have to disregard this anyway.

#### Moisture In Expansion Valve

**Q.** If an expansion valve has moisture trouble, will a dryer remove moisture from the valve or will the valve have to be removed from the system?

**A.** A dryer will do the job if it's left on long enough, especially if the dryer is installed in the low side of the system. It probably will be necessary to warm the expansion valve with a hot cloth or torch to melt any ice present.

#### Dehydrating at 225° F.

**Q.** Our practice has been to dehydrate units after new oil has been put in at 225° F. for four hours at 28 in. vacuum. Is this injurious to the oil?

**A.** The operation might possibly be a doubtful one. You would have to examine oil after the operation. But the future history of the unit is the best indication of the success of this method.

**Q.** Is there any solution to flush coils out without leaving a residue?

**A.** Carbon tet or refrigerant will work very well unless there are solids in the system.

**Q.** Is silica gel considered to be a satisfactory dryer for sulphur dioxide?

**A.** It can do a satisfactory job if the SO<sub>2</sub> is in the gaseous state, so the dryer should be put in the suction line. Most common dryers would be satisfactory.

#### Motor Substitution

**Q.** A serviceman has an emergency service call on a doctor's refrigerator that was filled with serums. This was a high side float job and the 1/2-hp. motor was burned out. The repairman had a 1/2-hp. split-phase motor. Could he use this motor, and how would it get it started?

**A.** In an emergency, the motor could be started by hand, after which it would continue to run provided the refrigerator was not allowed to cycle. The motor would have to run continuously.

The best way, however, would be to use a higher rated capacitor with the split-phase motor. The motor has to be larger, as in this case, where a 1/2-hp. motor replaced the 1/4-hp. motor.

insist on  
genuine

**Marlo**

products

**MARLO-HEAT TRANSFER**  
Since 1925

## INSTALL "Cross-Flo" IN THE COLDEST LOCATION

... And solve your  
moisture problems permanently

"The Colder the Drier . . . the Better the Drying Job"

says Ken Newcum, president REMCO, Inc.



Cross-Flo's exclusive new principle of flowing the refrigerant slowly across the bed of drying agent, instead of forcing it through a long clogged bed, entirely eliminates clogging and pressure drop. For this reason, you can install Cross-Flo in the most desirable location . . . in the lowside . . . and permanently forget your moisture problems.

It's a proven fact that Driers installed in the hot liquid line are the least efficient. So service engineers the country over are now looking to Cross-Flo for their most efficient operational performance—for Cross-Flo permits the most efficient installation . . . in the cold lowside, at the evaporator inlet (pictured) or evaporator outlet.

**REMCO HEAVY-DUTY  
"Cross-Flo" DRIER-FILTERS**  
CAPACITIES—  
LIQUID LINE: 1/4 to 7 1/2 HP  
LOWSIDE: 1/4 to 15 tons Freon-12  
SUCTION LINE: 3/8" to 1 1/4" O. D.  
Carried in stock by leading wholesalers everywhere

**REMCO**  
INCORPORATED  
ZELIENOPLE, PENNSYLVANIA

\*Circular 711-A gives you "all the facts" about the effect of temperature on drier-filter performance. If you don't have a copy, write for one today.



## Coast Conference--

(Concluded from Page 1, Column 4)  
and noon to 6 p.m. on Sunday, May 2.

A special program of technical meetings has been set up by the California Chapter of R.S.E.S., these meetings to be held on Saturday and Sunday mornings, May 1 and 2, from 9 a.m. to 12 noon.

Hotel reservations are being handled by Frank Dwyer, chairman of the Housing Committee, c/o Palace hotel, San Francisco, to whom requests for room reservations should be addressed.

## Post-Easter Week Shows Drop In Dept. Store Sales

WASHINGTON, D. C.—A drop of 12% in dollar volume of department store sales for the week ended April 3 over the corresponding week last year was reported by the Federal Reserve Board.

Reflected in the sales drop, according to the board, was the fact that the corresponding week last year was a pre-Easter one, while the similar week this year fell after the holiday.

The Richmond district showed the greatest drop for the week with 20%; Dallas district slipped only 3% below last years week.

Seasonally adjusted index for the month of March was estimated at 285, compared to 283 in February, and 272 in March, 1947.

## Oil Burner Men Fight--

(Concluded from Page 1, Column 3)  
ties are completed to make it possible for the middle east to supply most of Europe's needs, our industry will not be able to take care of further increases in heating oil demand of anything like the magnitude of the increases we have met in the past two winters."

The Managing Director of the Institute, however, hit the failure of the refiners to increase the production of burning oils by less than 2%, plus the failure to put idle transport into use early last fall.

Claims that the U. S. is running out of oil were derided.

The Institute recognized that strong conservation programs and a public relations plan was needed to counteract bad publicity.

## Western Show Exhibitors

	Booth No.
Airserco Mfg. Co., Inc.	113
Alco Valve Co.	322
Aminco Refrigeration Products Co.	132
Ansul Chemical Co.	202
Automatic Products Co.	116
Brunner Mfg. Co.	304
Bush Mfg. Co.	320
Chicago Seal	104
Copeland Refrigeration Corp.	120
Curtis Refrigerating Machine Division, Curtis Mfg. Co.	102
Davison Chemical	137
Detroit Lubricator Co.	201
Dole Refrigerating Co.	124
Ebeo Mfg. Co.	103
Electromatic Div., Simoniz Co.	123
Eston Chemicals, Inc.	130
Fogel Refrigerator Co.	107
Frigidaire Division, General Motors Corp.	138
General Controls Co.	101
L. H. Gilmer Co.	112
Handy & Harman	316
Heat-X-Changer Co.	136
Henry Valve Co.	121
Highside Chemicals Co.	117
The Imperial Brass Mfg. Co.	317
Jack & Heintz Precision Industries, Inc.	134
Kason Hardware Corp.	301
Kelvinator Div., Nash-Kelvinator	318
Kold-Hold Mfg. Co.	122
Kerotest Mfg. Co.	106
Kramer Trenton Co.	128
Lehigh Mfg. Co.	126
Linde Air Products Co.	303
Lynch Corp.	118
Mitchell Mfg. Co.	108
Mills Industries, Inc.	131
Mueller Brass Co.	302
Pacific Lumber Co.	133
H. A. Phillips & Co.	141
Ranco Inc.	319
Refrigeration Engineering, Inc.	306
Servel, Inc.	140
A. O. Smith Corp.	110
Sporlan Valve Co.	305
Standard Refrigeration Co.	105
Superior Valve & Fittings Co.	114
Tecumseh Products Co.	321
Typhoon Air Conditioning, Inc.	307
Ultra-Violet Products Inc.	111
United Friguator Engineers	125
United Refrigerator Co.	127
Universal Cooler	109
Virginia Smelting Co.	119
Wabash Mfg. Co.	139
Ward Refrigerator & Mfg. Co.	135
The Weatherhead Co.	129
Wolverine Tube	115

## Family Unit Sales--

(Concluded from Page 1, Column 4)  
there are in their markets, what the average income of the unit is, how much of that income can be allocated to appliances, and how the dealers can best merchandise instalment and time-pay plans.

It was revealed at the meeting that New York dealers are scheduled to receive G-E's automatic washer between mid-May and June 1, that limited production of the double-oven electric range should be under way by summer, and that the Disposall is now being tested by New York's sanitation department.

The retailers were also urged to find out what the needs are of families with babies, and how many older people (including those on pensions and fixed income) make up sales potentials. He suggested, too, that the dealers decide what they are going to do about satisfying their market's appliance requirements and about planning potential by-lines.

Andrews stressed that the days of "shirt sleeve selling" are back. He said this kind of selling has to include complete and careful planning, and he called upon the dealers to widen their sales areas and build greater volume by aggressive advertising, merchandising, and promotion programs.

The G-E official assured his audience there would be no change in the company's policy of "no private brand merchandise, restricted franchises, factory service, and full-powered merchandising support."

Andrews had some statistics for the retailers to consider. He reported: Industry production of major appliances in 1940 was slightly less than

5,000,000 units; output is expected to pass the 10,000,000 mark in 1948. Whereas G-E's output in 1940 was just under 800,000 units, it is scheduled to reach approximately 2,300,000 units this year.

"Our dishwasher plant at Scranton is currently producing at a rate 25 times greater than our 1940 sales," he said.

He contrasted the doubling of industry volume and number of dealers since 1940 with the tripling of G-E production but the increasing of its dealers by only 29%.

## GRUNOW AUTHORIZED DEALERS ARE MAKING MONEY!

Build up your new box sales now with Grunow Service Business!

Write for Authorized Service in your territory.

GRUNOW AUTHORIZED SERVICE, INC.  
4313 W. Fullerton Ave., Chicago 39, Ill.

## DISTRIBUTORS WANTED for ROYAL DRY BEVERAGE COOLERS

Incorporating the following features:

Rust-proof Stainless Steel Interiors—Silver Soldered Peerless Fin Coils—Delco Blowers—Sliding Hard Rubber Doors—3" Fiberglass Sealed Insulation.

IMMEDIATE DELIVERY IN 4, 6, and 8 FOOT LENGTHS

Write or Wire  
ROYAL COOLER SALES CO.  
4322 Clayton Ave.  
St. Louis 10, Mo. Telephone JE 4374

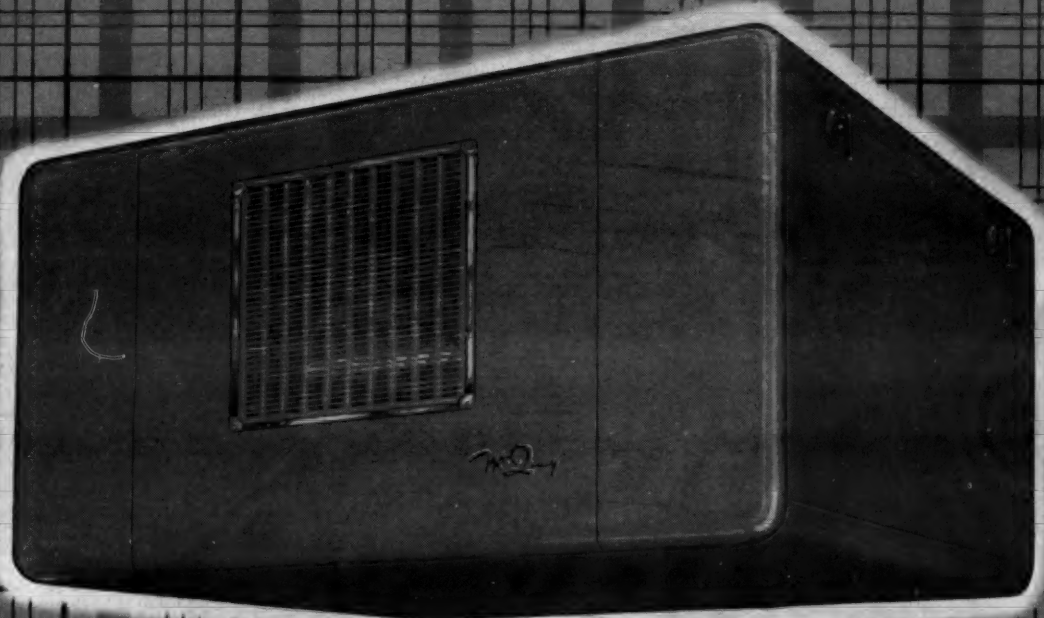


## ALCO VALVES

engineered refrigerant controls

"We are most pleased with Alco valves and have no hesitancy in advocating their use."

Jackson Ice & Fuel Co., Jackson, Ohio  
ALCO VALVE CO. 855 KINGSLAND AVE. ST. LOUIS 5, MO.



## HERE'S AIR CONDITIONING LUXURY ECONOMY SIZE!

Air conditioning is now on a "can afford" level for those smaller spaces where, actually, it is needed most. McQuay RH series units have been engineered to deliver thrifty year round air conditioning on a low initial investment. Designed for ceiling or regular fixture mounting, these units leave valuable floor space free. They are an

ideal answer to the air conditioning needs of individual offices, specialty shops, club rooms, restaurants and similar low capacity areas. Where space and cost are factors, get information on McQuay RH series units from the representative in your area or from McQuay, Inc., 1607 Broadway N.E., Minneapolis.

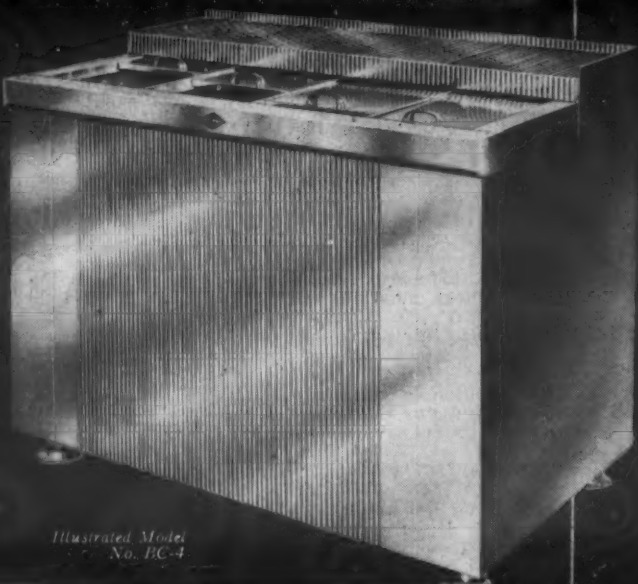
McQuay INC.

HEATING • AIR CONDITIONING • REFRIGERATION



## TY-BRO BOTTLE COOLER

has duct-controlled cold air



Illustrated Model No. BC-4

Directed Air is more efficient air—Ty-Bro has proven this to the refrigeration industry with its exclusive new principle of Duct-Control in this Bottle Cooler. Duct-Control directs the air to flow to all corners and sections of the cooler interior, at uniform rate and temperature. Storage racks within the box are arranged so that the flow of cold air is directed and controlled around the bottles, resulting in higher cooling efficiency.

TY-BRO sales policy of "highest quality at lowest price" is especially evident in this model. Write for descriptive literature and price lists.

- Stainless Steel Exterior\*
- Corrugated Top for proper drainage
- Steel Lids for each compartment
- Adjustable Wire Dividers

- Rustproof Galvanized Metal Interior
- Adjustable Steel Legs
- Fiberglass Insulation
- Heavy-Duty Blower

\*Stainless Steel throughout at slight additional cost.



TYSON METAL PRODUCTS  
6815 HAMILTON AVE. PITTSBURGH 8, PA.



## Krakow Directs Crown Ice Cream Cabinet Sales



S. J. Krakow

## West Coast Firm's Contest To Spur Cylinder Supply

LOS ANGELES — Upon hearing Kinetic Chemicals, Inc. plead for the return of 233,500 refrigerant cylinders immediately so that a new "Freon" shortage might be avoided this spring and summer, Lawrence P. Roth, owner of Refrigeration Service, Inc., here decided to do something about it.

Believing that the refrigeration servicemen themselves might have a solution to the problem, parts wholesaler Roth appealed to his customers through his house organ, *The Liquid Line* for their ideas on how large numbers of the needed "Freon" cylinders might be obtained in a hurry.

To spur thinking on the subject, Roth offered cash prizes for the best three letters received by April 19 and merchandise prizes for the next 10 best letters.

"Your idea might be valuable to the entire industry this coming summer so you may be helping your fellow servicemen as well as yourself," he wrote.

## Jesse Chester Blair Dies Ending 30-Year Career

LOS ANGELES — The refrigeration industry in southern California lost one of its best known and most liked members by the death last month of Jesse Chester Blair, after a lifetime in the industry, largely devoted to the education of young men in refrigeration and air conditioning.

At the time of his death Blair was employed by the Los Angeles City Schools as a full time coordinator in apprenticeship for refrigeration and air conditioning, a position he had held only since the beginning of the present school year, and which was necessitated by the expansion of the apprenticeship training courses given by the school system. Blair can be credited in large measure, for this expansion because of the interest created by his many previous years work devoted to educational work.

He had been active in the refrigeration field for some 30 years. In 1932 he became a member of the adult education faculty of the Frank Wiggins Trade School of the Los Angeles City School District and taught refrigeration and air conditioning in that trade school, and was one of the pioneers in organizing apprenticeship training in that industry.

In 1942 the growth of the apprenticeship training classes required the assignment of Blair to part time co-ordination of the program, and for the next five years those duties were combined with his teaching duties until in 1947 when he became full time coordinator.

## Bluffton, Ind. Store Sold

BLUFFTON, Ind. — The Norge Sales & Service Store, owned by Robert and William Forbing here, has been sold to W. C. Rose and Arthur Rose of Fort Wayne.

## CLASSIFIED ADVERTISING

RATES for "Positions Wanted" \$2.50 per insertion 50 words or under. 5¢ ea. additional word.

RATES for all other classifications \$5.00 per insertion 50 words or under. 10¢ ea. additional word.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count.

### POSITIONS WANTED

ARE YOU in need of a good serviceman? —We have a number of men available—Willing to work anywhere—Have had 34 weeks intensive shop training on all types of refrigeration. Our men are fully qualified. UNIVERSAL TRADES SCHOOL, 4030 So. 13th St., Omaha, Nebraska.

MANUFACTURERS REPRESENTATIVE would like to hear from manufacturers desiring coverage of original equipment manufacturers in Eastern Pennsylvania, South Jersey, Delaware, Maryland and Virginia Eastern shore. Twenty five years experience commercial refrigeration and air conditioning. BOX 2764, Air Conditioning & Refrigeration News.

CHIEF ENGINEER with twenty years experience in the design, development, servicing and production of domestic and commercial refrigeration equipment including hermetic and open type condensing units, air conditioning, and cabinets is available for a comparable position with some company manufacturing similar or allied products. BOX 2773, Air Conditioning & Refrigeration News.

CHIEF ENGINEER or project engineer with manufacturer of refrigeration equipment. Experienced in domestic and ice cream cabinet fields. BOX 2774, Air Conditioning & Refrigeration News.

ELECTRICAL REFRIGERATION Engineer desires position. Fifteen years experience in designing, testing, manufacturing and processing hermetic and open type refrigerator motor compressors, condensing units and systems. University graduate engineer. Excellent references. Location not objectional. BOX 2776, Air Conditioning & Refrigeration News.

### POSITIONS AVAILABLE

COMMERCIAL REFRIGERATION sales managers. Carrier Corporation requires two commercial refrigeration zone managers for positions with a good future. Applicants must have a proven record in the sale of commercial refrigeration to distributors or national users. Location South and Midwest. In reply state age, education, experience, preferred location and salary desired. Address Personnel Division, CARRIER CORPORATION, Syracuse 1, New York.

COMMERCIAL REFRIGERATION sales managers. Distributors and major dealers of Carrier Corporation products need five good commercial refrigeration managers for various locations throughout the country. Remuneration on the basis of salary plus a percentage of gross margin. Possible earnings of \$9000 to \$12,000 per year. In reply state age, experience and preferred location. Address Personnel Division, CARRIER CORPORATION, Syracuse 1, New York.

COMMERCIAL AND industrial refrigeration and air conditioning installation and servicemen with at least 3 years experience. 40 hour week, company trucks furnished. \$1.80 to \$2.00 scale. DRESCO REFRIGERATION COMPANY, 4404 Woodward, Detroit 1, Michigan.

HUSSMANN DISTRIBUTOR in San Diego and Imperial Counties in Southern California wants experienced food store equipment salesman. We carry the largest stock and have the finest showroom on the West Coast. A good salesman can make real money besides living in the finest climate in the country. WRIGHT REFRIGERATION, INC., 4025 Pacific Highway, San Diego, Calif.

COMMERCIAL REFRIGERATION Serviceman—For aggressive sales and service company located in Northern Ohio. Experience in commercial and air conditioning. Union wages. BOX 2760 Air Conditioning & Refrigeration News.

REFRIGERATION ENGINEER: Nationally known refrigeration manufacturer looking for refrigeration, mechanical, or electrical engineer with about five years experience in refrigeration design and development. Will pay salary commensurate with ability. Write full details of qualifications, experience, and salary expected. Enclose photos. Write BOX 2755, Air Conditioning & Refrigeration News.

WANTED BY parts jobber in refrigeration and air conditioning business in large Eastern city, a man qualified to take complete charge of refrigeration supply business, to handle sales promotion, purchasing, as well as personnel management. Reply BOX 2775, Air Conditioning & Refrigeration News, giving complete details.

SALES MANAGER needed: Manufacturer of refrigeration and allied lines has fine opportunity for well qualified man. Experience and contacts in refrigeration field necessary. Please give all details in first letter. BOX 2777, Air Conditioning & Refrigeration News.

WANTED SALES Engineer. An old-established company wishes to secure the services of a refrigeration engineer, familiar with Ammonia and "Freon" equipment, for Wisconsin or West Michigan territory. Preference will be given to a man with technical education and capable of handling a district office. In

reply state age, experience and other qualifications. BOX 2778, Air Conditioning & Refrigeration News.

### EQUIPMENT FOR SALE

FOR SALE: 60 ton Westinghouse used compressor with coils and economizers knocked down. Four American dual Centrifugal blowers 15000 CFM. 1—New 10 HP York compressor. 2—New 7½ HP York compressors. 4—New 7½ HP Universal compressors. 1—CV88 F York air unit. 1—CV 126F York air unit. THE BIMEI COMPANY, 2600 Colerain Ave., Cincinnati 14, Ohio.

SEALED UNITS rebuilt and exchanged. Prompt service on Coldspot (sealed & semi-sealed) Chieftain, Gale, Tecumseh, Norge and many others. One year guarantee. Write for price list and shipping instructions. BRIGHTON, 16640 Log Cabin, Detroit 3, Mich.

HERMETIC UNITS rebuilt: Westinghouse, Norge, Frigidaire, Kelvinator, Crosley, Philco, and G. E. (except Monitor top). One year guarantee, \$35.00 F.O.B. No relays or controls included. DOLL & LEWIS, INC., 2331 Frederick Ave., Baltimore 23, Maryland.

NEW GENERAL Electric motors, 1½ HP. 1800 R.P.M. 230 volts 1 Ph. 60 cycle. High starting torque. Constant duty sleeve bearing. List \$38 less 20%. Also in stock ¾ to 1 HP. EDISON COOLING CORP., 310 East 149th St., New York City, N. Y.

QUALITY BOBTAIL fountains; reach-ins, walk-in boxes—wood, metal; dough retarders; double duty cases—stainless steel, porcelain; dairy, florist, bakery cases; ice cream hardening cabinets; thermopane frozen food cases; milk, sandwich coolers; stainless steel back bars; with machines. Equipment made to special order. FRIGITEMP CORP., 931 Bergen St., Brooklyn 16, MA 2-9093.

ELECTRIC WATER coolers. Bottle type, used, in good running condition. Standard make. Attractively priced. One to ten. \$50.00 each. Ten or more, \$45.00 each. Twenty-five or more \$40.00 each. F.O.B. your plant. HINCKLEY & SCHMITT, 420 W. Ontario St., Chicago 10, Illinois.

SYRUP PUMPS, highly streamlined. All stainless steel. Can be completely disassembled for cleaning. Passed by the Los Angeles City Board of Health. Available with rectangular or oval lids. Franchises available for fountain manufacturers, parts jobbers and distributors. Your inquiry invited. KELLER MANUFACTURING CO., 2425 Eads Street, Los Angeles 31, California.

FOR SALE: Approximately 1200# coiled aluminum tubing in 40 and 50 foot lengths. .028" by ¼" O.D. 35-0. Make Offer. MIDWEST INDUSTRIES, INC., 835 Osage, Kansas City, Kansas.

3 HP CARRIERS \$310. 5 HP Mills \$395. 50 HP Schnacke less motor \$1195. 5 HP McQuay & Typhoon Weathermakers \$395. ¾ & 1 HP Amer Weathermakers \$175 & \$195. 15 HP Larkin Evaporative Condenser \$795. The following less motors: ½ HP Crew & ¼ HP Copeland units \$39 each; ½ HP Universals \$49 each. All new crated. PILGRIM REFRIGERATION CO., 48-20 43rd Ave., L. I. City, N. Y.

NEW NAVY surplus "Freon" cylinders 50 lb. size with superior valve complete with screw cap shipping weight 33½ lbs., I.C.C. Stamp 3-45. Quantity 52, \$12.00 each F.O.B. New York. R. & R. EQUIPMENT COMPANY, 2724 Third Ave., Bronx 54, New York.

SEALED CROSELEY terminals. Installed from the outside in a few minutes without opening the compressor or removing unit. No special tools needed. Stops leaky terminals on "F-12" units. Part # 1020 short model—for short Croseley terminals ("F-12" compressors with 4 mounting legs.) Part #1020 long model—for long Croseley terminals ("F-12" compressors with 3 mounting legs). \$5.25 set of three. Immediate delivery. Money-back guarantee. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

KOLD-HOLD PLATES (18" x 60"). Manufacturer's surplus. Three hundred and ninety-three (393) at \$5.00 each. UNITED REFRIGERATOR COMPANY, St. Paul 1 Minn.

SACRIFICE AIR conditioning units self-contained, manufactured by American Thermal Co., new in original crates, complete. Four AC300, 3 ton, \$750. Three AC500, 5 ton, \$895. All 220/440/60/AC/3. Wire, write or phone WANDS, INC., 1070 St. Charles Avenue, New Orleans, La.

SACRIFICE CONDENSING units new in original crates, water cooled, complete with motors, water valves, controls and magnetic starters. Hussmann W300 "Freon," 3 H.P. and Copeland 304W "Freon," 3 H.P., three phase \$349; Single phase \$370. Wire, write or phone WANDS, INC., 1070 St. Charles Avenue, New Orleans, La.

CLOSING OUT new Mills freezers! Brand new Mills Super Ice Cream Freezers fully automatic. These new, super, latest type Mills freezers will be sold at ½ price. You run no risk. I will guarantee that these freezers have never been run. YARBROUGH REFRIGERATION CO., Gadsden, Alabama, Phone 1637.

### BUSINESS OPPORTUNITIES

FOR SALE—Established refrigeration business in Indianapolis. 16 years in same location. Definitely a good income for one or more men. Plenty of up-to-date equipment. Priced for quick sale as owner is retiring and moving to Florida. BOX 2760, Air Conditioning & Refrigeration News.

FOR SALE: commercial refrigeration display room, warehouse, home. Well rated in Miami, Florida. Life time opportunity. BOX 2765, Air Conditioning & Refrigeration News.

COMMERCIAL REFRIGERATION business, established for the last ten years at present location, handling nationally known refrigeration equipment—three trucks on the road, and doing approximately \$40,000 a year business. Complete present inventory approximately \$17,000. Present building valued at \$10,000. No mortgages or debts against building or business. Reason for selling—retiring from business. For further information write P. O. BOX 382, Easton, Pa.

### MISCELLANEOUS

MAIL RUSTY refrigerator shelves to us for reconditioning. Rusty refrigerator shelves are a menace to health as well as being unsightly and curtail sales of reconditioned refrigerators. Rusty shelves are replaced and returned promptly, usually the same day we receive them. Serving the largest dealers New York area. References upon request. Prices reasonable. FARMINGDALE RETINING CO., Main and Front Street, Farmingdale, New York.

## SALESMAN

Wholesale distributor of nationally advertised household appliances is seeking services of alert young man who is aggressive and capable of managing a territory in Missouri and Illinois. Excellent opportunity.

Box 2769, Air Conditioning & Refrigeration News

## REFRIGERATION ENGINEER WANTED

by established commercial equipment manufacturer. Experience necessary. Must understand psychrometric calculations, balance machines and coils, specify valves, controls, etc. Must be able to conduct laboratory tests and analyze results. Permanent position for qualified man. Location Indiana. Write Box 2767, Air Conditioning & Refrigeration News.



You can effect a real ECONOMY with dependable LIPMAN refrigeration. LIPMAN machines are performance-proved with over 30 years experience in the commercial refrigeration field. Units available in ¼ thru 40 H.P.



## FLEXIBLE CHARGING LINES

Electrimatic Charging Lines have exceptional strength and are extremely flexible to withstand repeated flexing and twisting. Two styles: STANDARD, which comprises hose and fittings, and COMBINATION, which consists of hose, 6-in. copper tube extensions and fittings. See our catalog for details.

BUY FROM YOUR WHOLESALE

**Electrimatic**  
2100 INDIANA AVE CHICAGO 16, ILL.  
CANADA—2023 ADDINGTON AVE, MONTREAL

## The Answer to an IMPORTANT QUESTION

### QUESTION:

What about THAWZONE? Is it good?

### ANSWER:

Time-tested THAWZONE is not new . . . 10 years and no change in formula . . . 275 wholesalers (not counting their branches) . . . many service engineers, ice cream companies, manufacturers . . . dehydration, acid neutralization, prevention or reduction of oil decomposition, corrosion and copperplating . . . for the old or new refrigeration system . . . sales soaring!

Your nearest wholesaler can supply you

**HIGHSIDE CHEMICALS COMPANY**  
195 VERONA AVENUE, NEWARK 4, N. J.

**THAWZONE**  
PATENTED  
The PIONEER FLUID DEHYDRANT

## PERFORMANCE WITHOUT COMPROMISE

From internal engineering to external finish, every factor in Larkin refrigeration products is flawless in execution. The same constructive ability which originated patented Cross Fin Coils also produces Humi-Temp Forced Convection Units—Bare Tube and Zinc Fused Steel Plate Coils—Air Conditioning Units—Instantaneous Water Coolers—Evaporative Condensers—and other high-grade items demanded in the commercial and industrial refrigeration field.



**LARKIN COILS** 519 MEMORIAL DRIVE • S.E. ATLANTA • GEORGIA



## Corvallis Refrigeration Chartered as Freezer Firm

CORVALLIS, Ore.—Chapman Refrigerator Sales here, maker of the Chapman pioneer home freezer, has been incorporated as Corvallis Refrigeration, Inc., E. A. Hartford, secretary-treasurer of the new organization, has announced. Address of the firm has been changed to Box 229, this city.

At the same time, Hartford announced that the Pacific States Supply Co. of San Francisco, a subsidiary of the California Casket Co., has been named distributor of the Chapman home freezer in the 11 western states and manufacturer's representative in the rest of the country.

To meet a growing metropolitan demand, Hartford said, the Corvallis company has dropped the capacity of the Chapman freezer from 15 to 12 cu. ft.

## 'Twin Bill' Offered By Detroit ICI Group

DETROIT—"Indoor Comfort for Summer and How to Get It" plus "New Developments in Controls for Indoor Comfort" will be discussed in a twin-bill before the Detroit Chapter of the Indoor Climate Institute Wednesday evening April 21 at the Rackham Educational Memorial here, starting at 7:30 p.m.

J. W. Vogel of Westinghouse will present the first topic, while the second will be handled by J. W. Tracy of Minneapolis-Honeywell.

## 'Ray-Man' V-Belt Designed For Use on Rugged Drives

PASSAIC, N. J.—The addition of the newly developed "Ray-Man" V-belt to its line of industrial rubber products has been announced by Manhattan Rubber Division, Raybestos-Manhattan, Inc. here.

The new Ray-Man V-belt was developed by Manhattan's engineers to meet the need for a belt possessing features particularly applicable to rugged drives. According to the manufacturer, the engineered strength members have been especially designed for this type of service, and have added features of oil, heat, and static resistance.

## S. J. Hammer Sales Corp. Set Up In New York City

NEW YORK CITY—S. J. Hammer, former general sales manager of the D. W. May Corp., has announced formation of his own appliance sales organization.

With offices in the Astor hotel, here, the company will be known as the S. J. Hammer Sales Corp.

Hammer explained that he and his group of five salesmen will function much as wholesale furniture salesmen do. The concern will represent only manufacturers willing to reduce resale prices as a result of lower distribution costs, he said.

Merchandise to be handled, he said, includes radio and television, washing machine and vacuum cleaner lines—all nationally advertised. Retail prices will be cut 20% in one of the lines, Hammer said.

## Television Will Supplement, Not Replace Radio In Entertainment, Advertising

SUNBURY, Pa.—The idea that television will make all other forms of mass entertainment obsolete is nonsense, according to J. H. Stickle, advertising and sales promotion manager of the Westinghouse Home Radio Division here.

In a recent speech before the Rochester Sales Executive Club, Rochester, N. Y., Stickle said:

"The radio dealer is sitting in the corner with the shakes when he should be up celebrating the birth of a son. Instead, he thinks he sees a great, colorful industry being knocked out of the ring by a powerful newcomer."

Though welcoming television as another billion dollar business of the future, Stickle pointed out that both radio and the reproduction of recorded entertainment are "solid, well-rooted forms of entertainment."

"Radio has a definite, deep-rooted place in the American way of life. Neither television, moving pictures, or anything else can disturb it as a great and universal form of entertainment, and a necessary advertising and merchandising force."

"Records have found a 300-million-dollar notch in the business and now television adds sight. Actually the only thing the three have in common is that the same distributors and dealers sell equipment and reproduce all three."

Today's public, Stickle declared, is happy and used to living with radio and records. They are equally happy to add television. But experience shows that they are not happy to live without radio and records.

In the established television markets, Stickle added, manufacturers are actually seeing a gradual upswing in the sale of really good radio and phonograph instruments.

He explained:

"The folks and dealers who don't have television are the problem. They haven't had the experience and they don't do too much imagining. So far, it has taken experience to prove that today's homes need good radios, good phonographs in every room, and good television. And they are never going to be happy with merely a choice of one or the other."

Citing examples of the separate functions of the three forms of entertainment, Stickle declared:

"It's no fun for Pop having 20 small youngsters in the house watching a puppet show on television when he craves to get the latest dope from a network newsroom. And by the same token, when Pop has all the neighbors in to see an exciting session of the UN conference, the kids will run out to the phonograph to dance to hot platters every time."

"And you'll never get some woman to sit through hockey or basketball when she wants the Rochester Symphony or Eleanor Steber on FM. Sports will always compete with music and music with drama and drama with news. Today's public has learned to demand them all and seldom at the same time."

Another point adds to the dealer's fears, according to Stickle. They

keep thinking of how the infant wireless business blossomed into a giant business and literally knocked the phonograph business out of the ring.

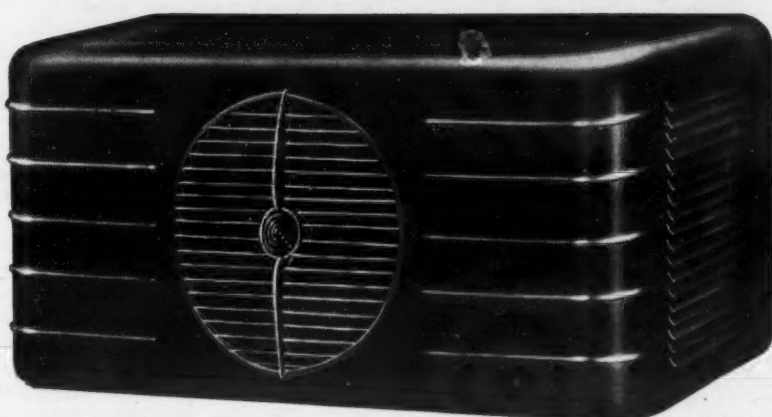
But, he reminded them, the phonograph business came back to turn in \$300,000,000 in record sales alone.

Contrasting the present with the past, Stickle said:

"The phonograph business during the early radio boom was thoroughly decadent. It did practically nothing to pull itself up by its boot straps and stay alive. Today's situation is entirely different."

## Immediate Delivery!

## Nationally Advertised MONITOR ROOM Air Conditioners



The Monitor represents a distinguished engineering triumph—brings a truly efficient, high quality, beautiful unit within the purse range of the average home-owner.

### 1/2 TON MODEL

12 1/2" high • 26" deep • 25" wide  
CAPACITY: 5500 BTU/hr. Circulates 220 CFM of conditioned air and provides 50 CFM of outside air.

COMPRESSOR: 1/2 H.P. hermetic design, capacitor-start induction-run motor. 1725 RPM, 115 V. 60 C. Single phase.

### 3/4 TON MODEL

15 1/2" high • 27 1/8" deep • 27 1/16" wide  
CAPACITY: 8000 BTU/hr. Circulates 300 CFM of conditioned air and provides 50 CFM of outside air.

COMPRESSOR: 3/4 H.P. hermetic design, capacitor-start induction-run motor. 1725 RPM, 115 V. 60 C. Single phase.

Sealed mechanism . . . quiet operation . . . directional air control . . . compact size . . . summer and winter use.

Over a million Monitor products now in use.

## MONITOR



The Most Distinguished Family of Home Appliances

Wire,  
phone,  
or mail  
coupon  
today!

MONITOR EQUIPMENT CORPORATION  
Riverdale-On-Hudson, New York 63, New York  
Please rush further information about Monitor Room Air Conditioners to:

NAME.....  
FIRM.....  
ADDRESS.....  
CITY and STATE.....

## The CRYSTAL-FLO "LB" Carbonator Assures Highest Quality Soda at Lowest Cost

Small in size, highly efficient, low in price, the Crystal-Flo Model "LB" Carbonator offers all users one of the greatest values in the carbonator field.



### It Provides:

#### Top Quality Soda — Finer Carbonation

Water is pumped into a stainless steel carbonating tank (no lining to need replacement) containing CO<sub>2</sub> gas. Here the water is separated into a fine mist that immediately absorbs gas and gives high carbonation at once.

#### Exceptionally Convenient

No belts, pulleys, gears or lubrication necessary. Normal maintenance includes only cleaning of check valve and strainer.

#### Low in Cost

Water pump runs only when soda water is being drawn. Gas is practically the only operating cost.

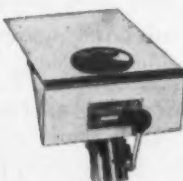
#### Capacity and Size

Capacity 20 to 25 gallons per hour. Occupies space only 16" x 20" x 12". Filter optional. There are other Crystal-Flo carbonators in larger capacities for all uses.

### CRYSTAL-FLO

#### the original UNDER-BAR DISPENSER

Now new and improved, the Crystal-Flo Dispenser eliminates cost, trouble and space needed to handle full or empty bottles for soft drinks. Saves top counter or bar space, too. Mixes better drinks in continuous flow. For all soft drinks and mixed beverages.



#### DISTRIBUTORS

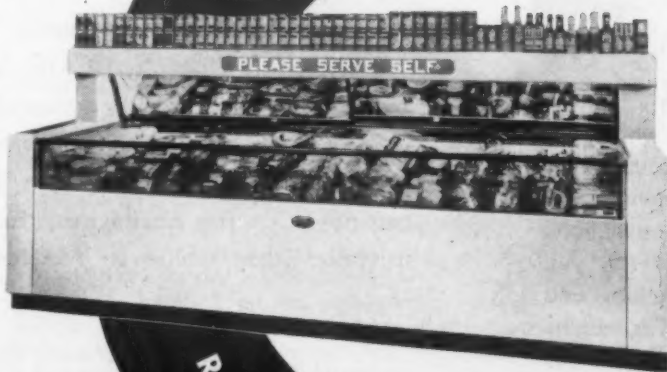
Here's your opportunity to increase your sales and profits with a line of the finest precision built and engineered units on the market. The Crystal-Flo System is ideal for the rich fountain and tavern market. Write for information.

AMP CORPORATION

2915 Locust Street

St. Louis 3, Missouri

## OPEN FOR MORE SALES!



The new Sherer open-type self service display refrigerator, for Meat and Dairy

Products, is meeting the expectations of America's most discriminating food

merchants. It will pay you to know more about it!



REFRIGERATED MERCHANDISERS BY



SHERER-GILLET CO., MARSHALL, MICHIGAN



## Introducing the Gyromatic Home Washer



At left is the new Bendix Gyromatic home washer which is equipped with an automatic soap or detergent injector. The Gyromatic stays in place without fastening down. The automatic injector, pictured across the page, moves soap into the tub through a feeder screw and an agitator. The agitator rotates slowly to give a constant supply to the feeder screw. The feeder screw carries the soap through a trap door into the tub. Inner metal and outer plastic lids cover the injector during operation.

## Price Lowered on New Bendix Line--

(Concluded from Page 1, Column 2) isolated from the cabinet by means of suspension springs and hydraulic shock-absorbers. Smooth action at both regular and high speeds is built into the machine.

For extraction periods, the cylinder spins at 525 revolutions per minute, a speed described by W. F. Oliver, vice president and director of engineering, as "the most effective, most economical, and safest for a household appliance."

Trough-type, perforated baffles are incorporated in the tub for better washability especially in hard water areas. A long-life clutch with greater capacity provides faster acceleration, thereby improving distribution of the garments in the tub and reducing vibration.

Then Bendix Gyromatic timer provides a drain period, spray rinse, and spin following the "soak" period, which is optional. Following the wash are a drain period, flush rinse and spin extraction, plus two deep rinses in fresh lukewarm water, each

separated by a drain period and spin extraction.

Designed by Mel Boldt, product stylist, the Bendix model GI presents a contour that blends with other laundry or kitchen appliances, a counter-height working area, a fluted front panel removable for ready servicing of the mechanism, an instrument bezel finished in two-toned chrome, stainless steel soap grill and plastic soap door, each removable for easy cleaning, finger-tip chrome latch for the porthole door, with matching hinge opposite. A black rubber kick-strip protects the bottom of the front panel.

Mounted for easy access on the instrument bezel are push-button selector switches, of plastic, for hot or lukewarm washings, a lighted timer dial molded of clear plastic with the legend molded in from the under side to make the lettering appear three-dimensional, the name-plate and plastic controls for the automatic injector.

Fully automatic, the Bendix

Gyromatic has a capacity of 9 pounds of dry clothes. The operator, after inserting the clothes, sets the controls for the temperature of water desired (hot or warm) and the length of the washing, adds soap and then leaves. With the GI or BI model, she inserts the clothes, sets the temperature control and the automatic injector, starts the machine.

The time control dial may be set to provide a maximum of 9½ minutes for soaking and 14½ minutes for washing. The operator determines these times, but the rinsing, draining, extraction, and fluffing operations run automatically on a predetermined schedule. However, the operator can vary the duration or sequence of the periods.

Specifications — *Exterior finish*, white porcelain top and door; cabinet finished in high luster white Dulux, baked on Bonderized steel. *Cylinder* — steel drum with baffles or exclusive Bendix design; finished inside and out in porcelain enamel. *Filling* — Through a waster-mixing valve connected by hoses to the hot and cold water supply; water is introduced through the top of the tub; to safeguard water supply, Bendix construction provides a built-in air gap, eliminating necessity for vacuum breaker in plumbing system. *Operating speed* — During washing and rinsing operations, 59 r.p.m.; during extraction, 525 r.p.m. *Motor* — specially designed, permanently lubricated bearings. *Dimensions* — Width, 29½ in.; height, 36 in.; depth, 24 in. Weight, uncrated, 356 pounds.

Similar in appearance to the Bendix Gyromatic is the deluxe model, the cabinet of which, however, is somewhat smaller. The automatic injector is available as optional equipment. Operating and engineer-

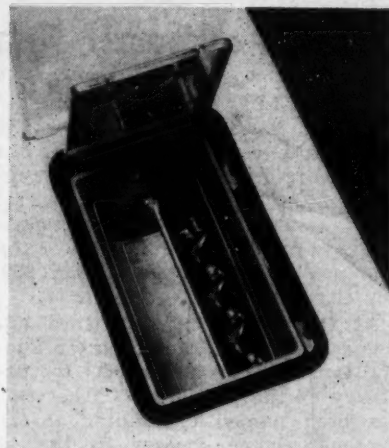
ing features are identical, except that the extraction speed is 402 r.p.m.

Brought to the front of the machine are the timer dial (left) and the selector switch dial (right) for hot or warm water. Each is made of lumarith gray plastic with the legend in white letters. Back of the controls is a chromium bezel which enhances appearance and protects the panel surface from wear.

The model S differs from the deluxe only in appearance, having the identical operating, engineering, and washing features. Matching the other new models in front panel flutings, the standard model has a squared back panel to fit with cabinet groups, making it eligible for kitchen installations. Controls are situated on either side of the back panel. Plastic soap door, controls, and rubber parts are made in matching gray colors.

The automatic injector consists of a compartment located inconspicuously in the top panel of special Gyromatic and deluxe models, an agitator which rotates in the compartment, a feeder screw which car-

## Automatic Soap Injector



Note feeder screw at right and agitator at left. Water softener can also be introduced. View is from above unit.

ries the material to the tub through a trap door, a spring-wound timer, and two movable indicators on a calibrated dial.

## PERSONALIZED SERVICE

CONVENIENT  
ONE-STOP  
SERVICE

# CHASE

CHICAGO'S  
OLDEST  
SUPPLY HOUSE

REFRIGERATION SUPPLY CO.

546-48 W. 119th STREET

CHICAGO 28, ILL.



## Let's Dream Awhile

Forget about business for a minute (that's all this will take). Relax. Get into a comfortable position. Take a deep breath. Let yourself go.

Feels good, doesn't it? And it's good for you. So why don't you do it more often? You know why . . . business won't let you. Not regular business . . . that's a pleasure. It's the *irregular* business . . . the headaches, the complaints, the mistakes that occur so frequently as to seem

to be a part of the regular business. But they're *not*. You don't have to put up with it.

Not, that is, if you specify BUSH Heat Transfer Products. Try this antidote for insomnia on your next job and see for yourself what better design, superior engineering and less frequent service calls can do for your nervous system.

Incidentally, your customers will like the idea, too. You'll find BUSH Products easier to sell.

BUSH Heat Transfer Products are AVAILABLE NOW through leading refrigeration and air conditioning wholesalers everywhere. The BUSH Factory Representative in your territory . . . an expert engineer . . . will be glad to help you with plans and specifications on your next important job.

BUSH MANUFACTURING CO. • WEST HARTFORD 10, CONN.



## Here's your CHECK CHART for REFRIGERATOR SHELVES

At United, service with a smile, is backed up with more than a desire to please. It's backed with adequate plant facilities for large quantity production, a complete and thoroughly experienced engineering department, automatic precision machinery, and quality control. That's why you can plan on strict adherence to your specifications and full maintenance of your delivery schedules. For quality refrigerator shelves or other welded wire parts, check with United first!



**UNITED STEEL AND WIRE CO.**  
150 FONDA ST., BATTLE CREEK, MICH.